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Among the many valuable books now being issued from the press, for the price and economy, this is the very best we know. It is a very complete set of illustrations of the diseases of the skin described in Wilson's excellent work on the subject, and should be in the hands of every private practitioner in America. In this set of plates we have a key to the solution of all the cutaneous mysteries not otherwise attainable in many years of hard labor.—*Chicago Med. Journal*, July, 1858.

We take pleasure in referring to Mr. Wilson's useful volume for the information now attainable, the more so as by the anatomical classification which he adopts, he makes a decided step in advance, and facilitates the acquisition of dermatology by removing much of the mystery that former writers had thrown around it.—*British and Foreign Medical-Chir. Review*, April, 1857.

The author adopts a simple and entertaining style. He strives to clear away the complications of his subject, and has thus produced a book filled with a vast amount of information, in a form so agreeable as to make it pleasant reading, even to the uninitiated. More especially does it deserve our praise because of its beautiful and complete atlas, which the American publishers have successfully imitated from the original plates. We pronounce them by far the best imitations of nature yet published in our country. With the text-book and atlas at hand, the diagnosis is rendered easy and accurate, and the practitioner feels himself safe in his treatment. We will add that this work, although it must have been very expensive to the publishers, is not high priced. There is no reason, then, to prevent every physician from obtaining a work of such importance, and one which will save him both labor and perplexity.—*Va. Med. Journal*, June, 1858.

Of these plates it is impossible to speak too highly. The representations of the various forms of cutaneous disease are singularly accurate, and the coloring exceeds almost anything we have met with in point of delicacy and finish.—*British and Foreign Medical Review*.

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The art of Chromo-Lithography has, in the present instance, achieved a very satisfactory result in the production of colored illustrations of cutaneous diseases. Special credit is due to Dr. Neligan for supplying us, he seems to me, with an atlas of this kind. Some of the drawings are particularly close representations of nature. We would instance the first plate, giving the various forms of erythema, and an admirable one of erysipelas in the face. The forms of herpes, plate 4; of impetigo, plate 7, &c. Plate 13 gives a most accurate representation of purpura, which cannot fail to impress the student so that he would at once recognize the disease at the bedside. Fine are the illustrations of ligo and purpura haemorrhagica, characteristic. We need scarcely add that we recommend the work. —*British and For. Medical-Chir. Review*.

The diagnosis of eruptive disease, however, under all circumstances, is very difficult. Nevertheless, Dr. Neligan has certainly, "as far as possible," given a faithful and accurate representation of this class of diseases, and there can be no doubt that these plates will be of great use to the student and practitioner in drawing a diagnosis as to the class, extent, and species to which the particular case may belong. —*Continent Medical Journal*.

Taken with the beautiful plates of the Atlas, which are remarkable for their accuracy and beauty of coloring, it constitutes a very valuable addition to the library of a practical man. —*Buffalo Med. Journal*.

Bayard in France, and Erasmus Wilson in England, have given us admirable illustrations of this interesting class of diseases; and Dr. Neligan has now contributed to the medical pictorial literature of Ireland a most creditable volume, which may vie with the others in fidelity and finish. —*Medical Times and Gazette*.

Nothing is often more difficult than the diagnosis of disease of the skin; and hitherto, the only works containing illustrations have been at rather inconvenient prices—prices, indeed, that prevented general use. The work before us will supply a want long felt, and minister to a more perfect acquaintance with the nature and treatment of a very frequent and troublesome form of disease. —*Ohio Med. and Surg. Journal*.

The lithographs are so colored as to be true and faithful representations of these ninety varieties of a class of diseases whose exact diagnosis is thus made plain and easy, and which, in the absence of such aid or a long and attentive study, is so difficult that very few practitioners seriously attempt it. The work is cheap, and no practitioner ambitious of a high professional status can afford to dispense with such help. —*Nash. Journal of Medicine*.

One of the handsomest of the many reprints that the eminent publishing house of Blanchard & Lea have given to the medical profession of this country, is the set of illustrations of cutaneous diseases by Dr. Neligan. As specimens of the lithographic art, we doubt whether superior can be found in any of the numerous works on skin diseases that have, from time to time, been issued from the celebrated publishing houses of the Old World. —*Louisville Review*.

Neligan's Atlas of Cutaneous Diseases supplies a long existent desideratum much felt by the largest class of our profession. It presents, in quarto size, 16 plates, each containing from 3 to 6 figures, and forming in all a total of 90 distinct representations of the different species of skin affections, grouped together in genera or families. The illustrations have been taken from nature, and have been copied with such fidelity that they present a striking picture of life; in which the reduced scale aptly serves to give, at a coup d'œil, the remarkable peculiarities of each individual variety. And while thus the disease is rendered more definite, there is yet no loss of proportion incurred by the necessary concentration. Each figure is highly colored, and so truthful has the artist been that the most fastidious observer could not justly take exception to the correctness of the execution of the pictures under his scrutiny. —*Montreal Med. Chronicle*.

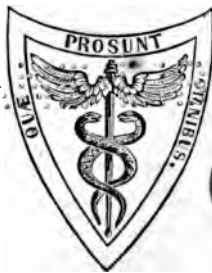
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HAND-BOOK  
OF  
SKIN DISEASES

FOR  
STUDENTS AND PRACTITIONERS.

BY  
THOMAS HILLIER, M.D., Lond.,  
MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS;  
PHYSICIAN TO THE SKIN DEPARTMENT OF UNIVERSITY COLLEGE HOSPITAL; PHYSICIAN TO THE  
HOSPITAL FOR SICK CHILDREN.

With Illustrations.



PHILADELPHIA:  
BLANCHARD AND LEA.  
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## PREFACE.

IN my capacity as Physician to the Skin Department of University College Hospital, it has fallen to my lot to give a course of Clinical Lectures to the students of that hospital. Whilst so engaged, I have often been asked, "What is the best English book to read on skin diseases?" Not being able to answer this question satisfactorily, I determined to try to write a book such as I could recommend to the student. The existing books were either out of date, diffuse, inaccurate, or incomplete.

My object has been to furnish to students and practitioners a trustworthy, practical, and compendious treatise, which shall comprise the greater part of what has been long known of cutaneous diseases, and of what has been more recently brought to light by English, French, and German dermatologists, as well as to embody the most important results of my own experience in reference to these diseases.

During the last few years our knowledge of skin diseases, especially of those dependent on parasitic animal and vegetable life, has been considerably extended.

Till very recently there was no special provision in any of our medical schools for clinical instruction on these diseases. In the last few years one or two of the large



metropolitan schools have made arrangements to supply this deficiency.

In writing this book, I have availed myself largely of the works of Professor Hardy, of Paris, whose descriptions of disease are generally very vivid and truthful; and I have also to acknowledge my obligation to Professor Hebra, of Vienna, from whose writings I have derived many valuable hints.

I have also obtained information from the work of Dr. Gustav Simon, from Dr. Jenner's Lectures, from MM. Bazin and Devergie's writings, and from Dr. Thompson's Treatise, edited by Dr. Parkes.

I have endeavored to simplify my subject by not coining new words, by not using old words with a new meaning, and by attaching a definite signification to all words employed.

In regard to treatment, it has been my object to avoid complexity by not unnecessarily multiplying remedies, and by stating the principles on which treatment should be based. I have especially insisted on the importance of studying the diseases of the skin in connection with other diseases, and of not supposing that its functions can be properly performed whilst other parts of the system are out of order.

The anatomy and physiology of the skin are very briefly adverted to, these subjects being left to be fully discussed in anatomical and physiological works.

I have introduced a few original wood engravings, taken under my care, in order to illustrate the micro-

scopical appearances presented by the hair and cuticle when affected by vegetable growth. The use of the microscope is in the present day almost essential for the diagnosis of some skin diseases, and it has been thought that these drawings may, in connection with verbal descriptions, guide those students who are not acquainted with the parasitic growths to the recognition of them in their private investigations.

Occasional reference is made in this book to the records of cases treated in University College Hospital, and where the case is not reported at length, the volume and page of the case-book have been given, for the purpose of identification and subsequent reference. The initials U. C. H. have, for brevity, been used for University College Hospital.

32 QUEEN ANNE STREET,  
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### AMERICAN PUBLISHERS' NOTICE.

IN reprinting this work, reference has been made, under each disease, to its representation in Neligan's "Atlas of Cutaneous Diseases." A few engravings on wood have likewise been introduced in the text.

PHILADELPHIA, April, 1865.



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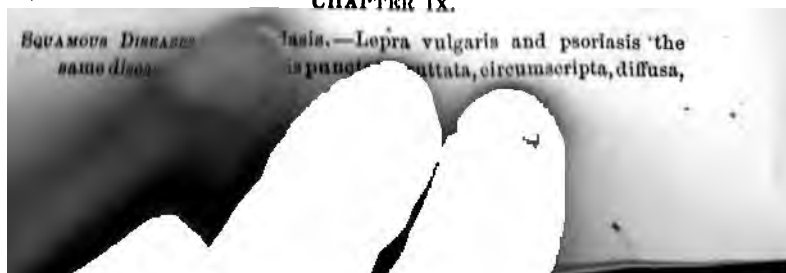
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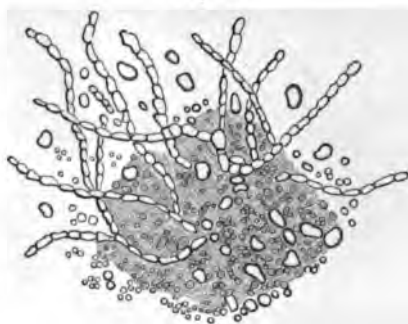




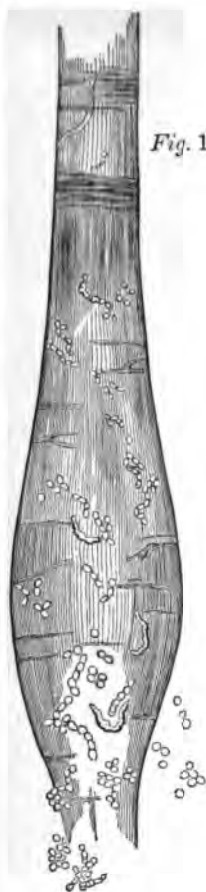


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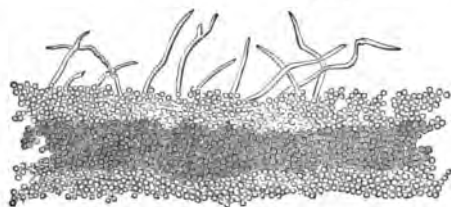
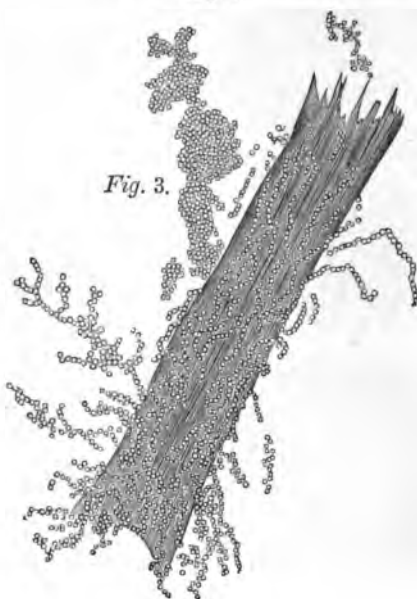
*Fig. 2.*



*Fig. 1.*



*Fig. 3.*

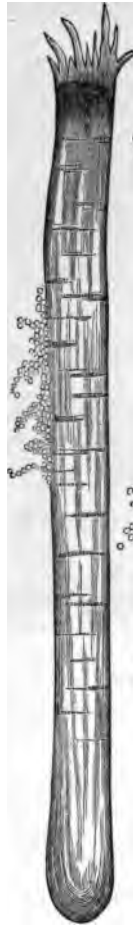


*Fig. 4.*

PLATE II.



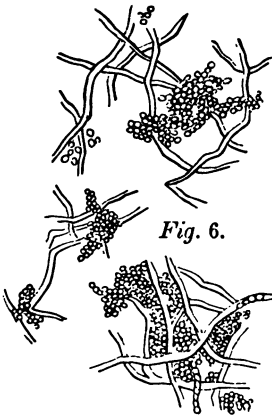
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 6.*



*Fig. 4.*



*Fig. 5.*



## DESCRIPTION OF THE PLATES.

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### PLATE I.

FIGURE 1 represents the root of a hair from a case of *Tinea Favosa*, showing the spores and mycellum of the *Achorion Schoenleinii* scattered over the bulb, and some swelling of the bulb. See page 260.

FIGURE 2 represents the spores and mycellum of *Achorion Schoenleinii* from a mass of favus.

FIGURE 3 represents the free broken extremity of a hair from a case of *Tinea Tonsurans*, with fibrous fracture, and infiltrated with sporules of the *Trichophyton Tonsurans*. This hair had been rendered more transparent by the use of diluted liquor potassæ. The sporules have grown out in a branched manner from the sides of the hair, and are clustered in masses near it to an unusual degree.

FIGURE 4 represents a fragment of hair taken from the scalp of a child suffering from *Tinea Tonsurans*. The hair had been kept for days on a cut apple placed on damp sand, under a glass tumbler. The structure of the hair is completely obscured by the abundant growth of spores; on the upper side of the figure filaments of mycelium are seen growing out.

## PLATE II.

FIGURE 1 represents a downy hair from a patch of Ringworm on the arm of a nurse who was attending to cases of *Tinea Tonsurans*. The hair is broken off short, and there are scattered over it small spores of a fungus which were insoluble in ether and liquor potassæ. By the side of it is cuticle in which there are the spores and filaments of a fungus.

FIGURES 2 and 3 represent short hairs taken from around a bald patch of *Tinea Decalvans*; they exhibit the peculiar fibrous fracture, with an excess of pigment at this part, and radiating fibres. Around figure 2 are seen spores of a fungus having all the appearances presented by the fungus of *Tinea Tonsurans*. It is not usual to find such large spores as these in *Tinea Decalvans*; in many cases no spores at all can be found; and when present, they are usually smaller, and very fine filamentous branches are described. The fungus has been named *Microsporon Audouini*. In figures 3 and 4 the bulbs of the hairs taken from *Tinea Decalvans* are seen to be atrophied and drawn to a point. The dwindling often proceeds to a more advanced degree than is depicted in this Plate.

FIGURE 5 is a hair taken from the face of a man suffering from Universal Alopecia, whose case is described at page 280. The bulb is here dwindled to a point, and bent on the shaft at an acute angle, whilst the shaft is split on itself longitudinally.

FIGURE 6 represents the growth of fungus in the epidermic scales, taken from a case of Pityriasis Versicolor. The scales were scraped off with a blunt knife, and treated with dilute liquor potassæ prior to examination. The sporules are in nature rather more spherical than they are represented by the engraver in this figure. The fungus is called *Microsporon Furfur*.

The objects represented in these Plates are all seen with a magnifying power of 200 diameters. The drawings have been furnished by the Author, and engraved by Mr. Sherwin.

# HAND-BOOK

OF

# SKIN DISEASES.

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## CHAPTER I.

### INTRODUCTION.

**GENERAL WANT OF KNOWLEDGE OF THE SUBJECT.—REASONS.—IMPORTANCE AND ADVANTAGES OF THE STUDY.—TO BE STUDIED IN CONNECTION WITH, AND ON THE SAME PRINCIPLES AS, OTHER BRANCHES OF MEDICINE.**

THERE is probably no class of diseases less understood both by medical students and practitioners than the class of Skin Diseases. There are several causes which have conduced to this result. One cause is the great diversity of names which have been given to these diseases by different authors: some diseases having several different names, and the same name having often been given to diseases totally distinct from each other; even the same writer has given new names to diseases described previously by himself under other names, and some authors use familiar terms with well-recognized meanings in a manner quite peculiar to themselves. This has, of course, created great confusion, and prevents many students from making themselves masters of the subject. Another reason for the lack of information on this branch of medical science has been the want of clinical instruction: there has been but little opportunity afforded to the student of seeing at any one time a number of cases of skin disease. Mere descriptions or even drawings of these



diseases are not sufficient to enable one to recognize them when they occur on a patient. A knowledge of dermatology such as will be of real service in practice can only be obtained by seeing the disease itself. Hence the value in a medical school, of a special department where the student may see, in a few visits, illustrations of all the chief diseases to which the human skin is liable. When patients present themselves for treatment, the characters of their diseases are frequently ill defined, and will only be appreciated by those who have previously seen more typical cases of the same disease.

The difficulties of understanding skin diseases have been increased not only by the multiplication of long names, but by endless varieties of classification and extreme subdivision. From the fact that all morbid changes in the skin are open to inspection and have been closely observed, the names of skin diseases have been multiplied, the same disease receiving different names from the different appearances presented by it at different stages of its progress, or from variations in its severity, or from peculiarities in the individual.

Notwithstanding the apparent difficulties of properly understanding the diseases of the skin, there is no class of ailments which will more amply repay the student for the study of them. There is not really more difficulty in recognizing them than in recognizing other diseases; when the rudimentary principles on which they are classified are understood, the diagnosis is commonly a simple matter. Diseases of the skin are very frequent; they cause great disfigurement, many of them are attended with excessive irritation and pain, and they are regarded with a sort of instinctive abhorrence which makes people most anxious to get rid of them at any cost. Many of the diseases of the skin yield readily to treatment, others are very intractable; it is therefore of great importance to know to which group each case that presents itself for treatment belongs.

Some skin diseases are purely local; others are indicative of constitutional derangement, which it is necessary to recognize in order successfully to treat the case. The different success attending judicious and injudicious treatment is most striking, and obvious even to the public.

Diseases of the skin have been too much separated from other diseases, and the skin has been looked upon too much as independent of other parts. But the diseases of the skin are often dependent on certain constitutional states or the diseases of other parts, and the skin, when extensively diseased, leads to morbid conditions of parts not anatomically related to it.

Dermatology should be studied on the same principles as and in connection with other branches of medicine; diseases of the skin depend on the same kind of causes, and run a similar course to the diseases of other organs.

In most skin diseases it is necessary to consider the constitutional state which disposes to it, the local condition which makes the skin susceptible, and the external local cause which determines the production of the disease. A knowledge of the anatomy and physiology of the skin, as well as the general principles of medicine, is an essential preliminary to a proper study of skin diseases. All affections attended with eruptions or changes in the healthy structure, functions, or color of the cutis or its appendages, the cuticle, the nails, and the hair, are really diseases of the skin. A large proportion of these diseases are dependent on constitutional disease; in some the latter is not very important, whilst in others the external local disease is an unimportant part of a serious general illness. There are some general diseases which, although accompanied with characteristic eruptions on the skin as a part of their anatomical characters, are most conveniently described as constitutional maladies: such diseases are small-pox, scarlet fever, and

measles. It is not my intention in this handbook to enter fully on the consideration of these specific febrile eruptive diseases, but briefly to refer to the eruptions with which they are accompanied. In the same manner the syphilitic skin diseases will be described, so far as to enable the student at once to recognize the various eruptions met with in secondary and tertiary syphilis; but it is not proposed fully to discuss all that relates to constitutional syphilis.

Ulcers might strictly be classed with diseases of the skin, but their description will be left for books on surgery.

## CHAPTER II.

### CLASSIFICATION.

ANCIENT SYSTEMS.—PRINCIPLE OF WILLAN'S SYSTEM.—REVIEW OF HARDY'S AND HEBRA'S CLASSIFICATIONS.—OTHER SYSTEMS ALLUDED TO.—THE AUTHOR'S SYSTEM.

It is necessary, in order advantageously to study the diseases of the skin, to classify them, and thereby obtain a comprehensive view of them, and a notion of their natural affinities, as well as to be able to distinguish one from another, and to give a name to any case of disease that presents itself.

The oldest system of classification, that of Galen and Mercurialis, had for its principle the *seat* of the disease, and divided the diseases into those of the hairy scalp and those of the rest of the body. Another division, much more scientific, is into local or idiopathic and constitutional or sympathetic; but, unfortunately, the same diseases may be due to local or general causes. Another system proceeds on the assumption that diseases of the different structures of the integument can be distinguished from each other, as diseases of the cuticle, of the cutis, of the follicles, of the vessels, &c. In fact, however, the integument is a compound organ, whose separate parts are seldom diseased separately. Mr. Erasmus Wilson's system is on this basis.<sup>1</sup> The course of a disease, whether with or without fever, and the duration, whether acute or chronic, have been taken as the ground of classification by Frank and others. But although some skin diseases are always acute and others always chronic, many are

<sup>1</sup> Whilst these pages are passing through the press Mr. Wilson has published a new system on a pathological basis.

sometimes acute and sometimes chronic; for example, eczema, urticaria, and impetigo.

Hebra's system is founded on the basis of morbid anatomy, and is framed with the object of maintaining a congruity between the classification of diseases of the skin and that of diseases of other parts of the system.

He gives twelve classes:—

- I. Hyperæmiæ.
- II. Anæmiæ.
- III. Anomalies of secretion of the cutaneous glands.
- IV. Exudations.
- V. Hæmorrhages.
- VI. Hypertrophies.
- VII. Atrophies.
- VIII. Neoplasmata.
- IX. Pseudoplasmata.
- X. Ulcerations.
- XI. Neuroses.
- XII. Parasites.

For subdivisions, see Table appended. This system is very scientific and complete. It has, however, the disadvantages of being complicated and difficult for the student to follow. In the present state of our knowledge, a mixed system of classification appears to be the most convenient; hereafter, a more scientific and logical system may be adapted.

Mr. Hardy has adopted a system which has considerable merit. It involves, however, theories which are not proved, and are certainly not absolutely true, though they may approach the truth.

The main peculiarity of his system is the introduction of a distinct class of diseases, under the head of *Dartres*. This is a term formerly much used in France, which had come to have a special meaning, as an imaginary constitutional

state, of which a great many skin diseases are the signs. It meant in France what the English public mean by scrofula, or scurvy. Hardy attempts to give to the word a distinct meaning, and to describe a dartous diathesis distinct from scrofula, syphilis, or rickets. He describes the dartous diseases as affections of the skin, with several different elementary lesions not contagious, often transmitted by inheritance, reproducing themselves in a constant manner, attended with itching as a prominent symptom, always disposed to attack new regions of the skin, habitually chronic; the eruptions heal without scar, though they are often accompanied by ulcerations. He says that dartous persons, though looking healthy, are not perfectly so. Their skin is habitually dry, and is often the seat of itching, even in the absence of eruptions; this is especially noted around the anus. They have generally a very good appetite. Their skin is extremely susceptible to irritation from slight causes. Alcoholic drinks, want of sleep, coffee, certain articles of diet, the application of a plaster or water dressing, may induce irritation. After a time the disease manifests itself more decidedly by vesicles, papules, or scales, or by all these combined. The eruptions have a tendency to involve several regions at once, and to spread. They are commonly symmetrical; not unfrequently there is a flux from the mucous membrane, either ophthalmia, stomatitis, otorrhœa, or leucorrhœa; laryngitis, bronchitis, and gastro-enteritis, too, are not uncommon. The four diseases which he considers to be essentially dartous are eczema, lichen, pityriasis, and psoriasis. Eczema most commonly attacks those of lymphatic temperament, lichen those of nervous, pityriasis those of bilious, and psoriasis those of sanguine temperament.

I do not think that Hardy has clearly established the existence of a distinct diathesis, such as he describes under the name dartous; but there are good reasons for placing eczema

and lichen together, whilst psoriasis, chronic eczema, and lichen, for purposes of treatment, must also be regarded as very nearly allied. Pityriasis is an ill-defined disease, as I have stated in the chapter on that subject.

The system adopted by Plenck, and afterwards followed by Willan and Bateman, has met with most favor in this country. The distinctive names are based on the elementary lesions of the skin; that is to say, the primary changes which the skin undergoes in its appearance in the different diseases. This plan pays no attention to the natural affinities of diseases, or to their causes, and is no guide to their treatment. It is in dermatology something like the system of Linnæus in botany; and it must one day be superseded by a more natural system, just as the systems of Jussieu and De Candolle have prevailed in botany. Willan places impetigo, smallpox, and scabies together; whilst he separates scarlet fever and smallpox, lichen and eczema, rupia, and ecthyma, which have very close pathological relationships. Then, on his system, diseases are arranged entirely on the basis of their primary elementary lesions, several of which may be seen at different periods of the same disease. For instance, in the exanthemata, papules are often seen, as in measles; or miliary vesicles, as in scarlatina; and in erysipelas, bullæ are seen.

Many vesicles and many pustules begin as papules; many pustules begin as tubercles. Vesicular diseases lead to maculæ, so do papular and pustular. Squamæ often result from vesicles, or from papules or exanthems. His system has the disadvantage of separating dermatology from all other branches of medical knowledge, which is very undesirable, and has led to much confusion and error. As an aid to diagnosis, his system of classification is convenient, but as a guide to treatment it is of no use. If diseases could be classified, according to their causes, this method would

be useful, because the first indication in treatment is to remove the cause.

Unfortunately, this plan presents many insuperable difficulties in the present state of our knowledge. A few remarks on this method may be useful. Parasitic diseases, being all caused by the development of a parasite, are thus placed together; the essential part of their treatment is to destroy the parasite. The essential characters in this class depend on the existence of a parasite, either animal or vegetable; the elementary lesions are in some vesiculæ, papulæ, and pustulæ, as in scabies; or vesiculæ and squamæ, as in tinea tonsurans; or squamæ alone, as in pityriasis: in addition to these eruptive lesions, there are certain distinctive features more directly dependent on the parasite itself.

Other diseases are purely local, and, if treated at all, must be treated by local means: such are warts, molluscum, strophulus albidus or acne miliaris, moles, nævi, keloid of Alibert, and ephelis.

Others are due to structural defects, and admit of no curative treatment; the symptoms accompanying them may sometimes be relieved; such are xeroderma, ichthyosis, and albinism.

A large number depend on a distinct specific poison or virus: for example, measles, scarlatina, and smallpox. In these there is no special treatment for the cutaneous phenomena; and the general diseases must be treated on general principles, by watching the indications of nature, and averting the tendencies to death. Others are of an inflammatory nature, and require to be treated as other inflammations; they are either general or local. Of the local kind are intertrigo, pustules from tartar emetic, eruptions from handling arsenic, grocers' itch, the psoriasis of washerwomen, &c. Of the general kind are eczema, impetigo, lichen, strophulus, ecthyma, rupia, pemphigus.



But in cutaneous inflammations, as in the inflammations of other parts, there are certain constitutional conditions and temperaments which give a character to the inflammation. The patient may be strumous; he may be in a cachectic state from a variety of causes; he may be rheumatic or gouty; his temperament may be sanguine, lymphatic, nervous, or bilious. In treatment each of these points must be borne in mind.

There are some skin diseases which must be regarded as due to nervous disturbance, probably of a reflex character; of this kind are erythema fugax, urticaria, and some of the forms of prurigo. In these we must remove the exciting cause if it can be ascertained, frequently gastric disturbance or some blood disease, and reduce the irritability of the nervous system by nervine tonics and other means.

The squamous disease, psoriasis, may be regarded as a form of inflammation or disturbed nutrition, frequently hereditary, but the determining cause of which is not determined. Arsenic is of use in this disease. Lupus and its allies are to be regarded as diseases of nutrition dependent on struma, and treated accordingly.

The Eastern leprosy or elephantiasis græcorum, pellagra, and the ngerengere of New Zealand, must be looked upon as diseases of nutrition affecting the skin, in common with other parts, dependent on the want of hygienic conditions, especially suitable food and pure air.

On Willan's system no note is taken of syphilitic skin diseases as distinguished from others. This is a subject of the utmost importance in reference to treatment. Every form of elementary lesion (papulæ, squamæ, vesiculæ, maculæ, &c.) is met with amongst the syphilides; but for purposes of treatment it is infinitely more important to know that a disease is syphilitic than to know whether it is papular or squamous; the  
reated: all the

local phenomena, however different they may be from each other, will in this manner be got rid of.

The system of classification which I have adopted is a mixed one, partly proceeding on the natural affinities of the diseases, and partly adopting Willan's principle of elementary lesions.

I arrange all the diseases under four main divisions—parasitic, acute specific infectious diseases, syphilides, and other diseases. I do not quite see my way clearly to two other divisions, namely, scrofulides and dartres.

The *syphilides* and *other diseases* I have distributed mainly on Willan's principle; but amongst the *syphilides* I have introduced, in addition, vegetating, pustulo-crustaceous, and ulcerating; and amongst *other diseases* I have added hæmorrhagiæ, diseases of sebaceous glands, and heteromorphous exudations, and have omitted tuberculæ as an ambiguous word. Instead of it I have made a genus of hypertrophies and degenerations. I have also dropped bullæ, and thrown it into the same category as vesiculæ.

The details of several systems of classification, including that of Dr. Buchanan, of Glasgow, will be given in the Appendix.

## CHAPTER III.

### ANATOMY AND PHYSIOLOGY OF THE SKIN.

BEFORE commencing the description of morbid skin, a very short reference must be made to the structure of healthy skin. It consists of the corium, derma or cutis vera, and the epiderm or cuticle. This last varies in thickness from  $\frac{1}{8}$  to  $\frac{1}{2}$  of an inch. It is thickest on the palms of the hands and soles of the feet. It is described as consisting of two layers, the mucous and the horny, differing mainly in the shape of the cells and moisture of their contents. The more superficial cells have no visible nuclei.

The cutis vera varies in thickness from  $\frac{1}{8}$  to  $\frac{1}{2}$  of an inch; its average thickness may be taken as half a line. It is generally thicker on the aspect of extension than on that of flexion. The cutis has been described as consisting of two layers, the reticular and papillary. The papillæ are small solid flexible elevations of the cutis, conical in shape, and simple or compound; their length varies from  $\frac{1}{8}$  to  $\frac{1}{2}$  of an inch. On the hand there are as many as eighty on a square line, arranged in ridges. The cutis is composed of fibro-cellular, elastic, and plain muscular fibres, with some fat cells, bloodvessels, lymphatics, and nerves.

Bloodvessels and nerves enter the papillæ, but there are many papillæ without nerves. The sebaceous glands, which are clusters of small rounded saccules imbedded in the substance of the corium, open by small ducts into the hair follicles, not far from their mouths. Several of these glands may open into one hair follicle. Often the largest glands are connected with the smallest and most downy hairs. The

only parts without hairs on which these glands are met with are the labia minora, the glans penis, and the prepuce.

The *sweat glands* are seated on the under surface of the corium and in the subcutaneous fat. They consist of a round coil of fine tube leading by a long passage through the true skin and cuticle, where it opens by a slightly widened orifice. The orifices can be seen very plainly with a common lens on the palmar aspect of the fingers, arranged very close together on the ridges formed by the papillæ. On the palm of the hand nearly 3000 open on a square inch; and on the lower limbs and back of the trunk, from 400 to 600 on a square inch.

The skin is a vast emunctory organ, giving off on an average eleven grains of secretion per minute, or two pounds in twenty-four hours, of which one hundred grains are nitrogenous. This secretion is effete material, which requires to be taken from the blood in order that health may be maintained. If the action of the skin be impeded, extra work is thrown on the kidneys and the mucous membranes generally; and if the kidneys or mucous membranes do their work of excretion imperfectly, the skin will occasionally come to their assistance. The secretion of sweat serves another very important purpose, that of preventing undue elevation of temperature of the blood and tissues generally. Under some conditions the skin acts as an absorbent surface, but this function is much restricted by the epidermis. Still, it must be borne in mind in the use of powerful local applications, otherwise very unpleasant symptoms may arise from the use of mercurial ointments or applications containing hydrocyanic acid, especially in parts where the cuticle is thin, and the absorbents numerous, or, still more, if the cuticle be at all abraded.

To show the importance of the functions of the skin, the experiments of Fourcault may be quoted, in which he cov-

ered animals with a coat of varnish, so that the secretions of the skin could not pass off. The animals thus treated all died very rapidly, with their blood imperfectly arterialized, and the temperature of their bodies much reduced.

It appears from these experiments that the skin is not only an emunctory organ supplementary to the kidneys, but also a maintainer of animal heat by a sort of respiration supplementary to the lungs. Many of the lower animals are greatly dependent on the skin for the oxygenation of their blood, and in man this is no doubt true in a minor degree.

The secreting action of the skin is very much influenced by the condition of the circulation and the nervous system, as seen in the cold perspiration attending syncope, and the dryness of the skin which often accompanies nervous excitement.

The *sebaceous glands* are described in Chapter XII.

## CHAPTER IV.

### DEFINITION OF TERMS.—ELEMENTARY AND SECONDARY LESIONS.

*Exanthemata*.—These are characterized by redness, which almost or quite disappears on pressure. Essentially they are due to an excess of blood in the small vessels. There is an entire absence of vesicles, pustules, and scales. Occasionally the blood accumulates to such an extent at some points of the cutis as to cause elevation; if these points are small and round, they resemble papules; but, unlike papules, the elevations as well as the redness temporarily disappear on pressure. Exanthems often terminate in desquamation, a separation taking place between the injected cutis and the cuticle. In some cases there is an effusion of serum; this is seen in scarlatina.

*Papules* are small solid elevations of the cutis, in shape either pointed or flat, conical or hemispherical; in color, either some shade of red, brown, livid, pale, or of normal skin color. If red, the color disappears on pressure, but the elevation is left.

Papules are produced in a variety of ways. (1.) One variety, the commonest, is due to exudation into a portion of the cutis, either into the papillæ, the follicles, or the intermediate structures. (2.) Others are dependent on hypertrophy of the normal papillæ, as in some forms of ichthyosis. (3.) Others are due to hemorrhage into the deeper layers of the epidermis, as in lichen lividus. (4.) Papules are sometimes caused by an accumulation of sebaceous matter in a sebaceous gland, of which the orifice is obstructed (*comedones*). (5.) Others are due to degeneration of sebaceous glands,

which are changed into opaque white points about the size of small pins' heads. These are found in adults on the eyelids, the penis, and scrotum, and have been called milium, pearly tubercles, and sebaceous miliary tubercles. (6.) Other papules are due to the abnormal formation and accumulation of epidermis in the orifice of the hair sacs; they are either perforated by a hair, or under the centre of them is found a hair more or less twisted (lichen pilaris (Willan), or pityriasis pilaris (Devergie)). (7.) Small papules are sometimes caused by mere spasmodic contraction of the muscular tissue of the skin (as in cutis anserina, from cold).

The course and duration of a papule vary according to its morbid anatomy. The papule due to exudation often goes on to a vesicle or a pustule, or remains as a papule for an indefinite period; after a time it is absorbed, and desquamation results. The papules, due to hemorrhage or to changes of the sebaceous glands, are more lasting, and those due to hypertrophy of papillæ are still more permanent.

*Tubercles* are solid elevations of the cutis, exceeding papules in size, varying from that of a lentil to that of a hazel-nut. There is no absolute line of demarcation between a papule and a tubercle; the distinction is an arbitrary one founded on size only. In color they exhibit the same variety as do papules. In form they are hemispherical, conical, flattened, or pointed. Their morbid anatomy and mode of production are the same as those of papules, except that they are not produced in either of the last two ways mentioned under the head of papules.

Moreover, changes in *several* sebaceous glands, not in one alone, are required to form a tubercle; and exudation must take place into larger portions of the cutis to form a tubercle than to form a papule. The changes which tubercles undergo consist either in a complete absorption of the interior and desquamation of the surface, or in hardening by organiza

tion, drying up, or cretification, or, lastly, in softening and suppuration:

*Pomphi* or *wheals* are names given to eruptions, accompanied by slight elevation, which are firm to the touch, and horizontally measure much more than they do vertically. Their color is either red, pale red, bluish-red, or of pale skin color. In the latter case especially, they are surrounded by a red margin. The size of a pomphus does not usually exceed half an inch square, but by the amalgamation of several pomphi a size of three or four inches square may be attained. Their form is various, more or less rounded, stripe-like, or even serpentine. The anatomical seat of wheals is the superficial layer of the cutis vera. They are due, it is believed, to exudation of serum; the redness around them is due to the dilatation of bloodvessels.

The sudden manner in which pomphi appear and disappear has led some authors to ascribe them to spasm of the muscular tissue of the skin. The muscular fibres discovered in the skin are not arranged in circles, or else one might be able to understand this explanation.<sup>1</sup> Wheals undergo no further metamorphosis, and commonly disappear without desquamation.

*Vesicles* are small elevations caused by a collection of fluid under the horny layer of the epidermis. In size they correspond to papules. The contents are at first transparent, but often become milky and opaque from the formation of pus, or reddish from an intermixture of blood. Their walls are usually translucent, but occasionally become opaque. Some vesicles are not rounded, but have a central depression, and are said to be umbilicated. This form is sometimes due to the formation of a vesicle immediately around a hair follicle; the epidermic layers forming the root sheath of the

<sup>1</sup> This point is more fully considered under the head of Urticaria.



hair not being raised by fluid so easily as the layers in the surrounding skin. Some authors ascribe the central depression to a sinking of the centre after previous distension of the walls; this is not the most common mode of its occurrence. Some vesicles are acuminate, instead of being globose.

The *seat* of vesicles is between the mucous and horny layers of the cuticle, either at the orifice of a hair follicle, or elsewhere. It is probable that the orifices of the sweat glands are not, as was once supposed, common seats of vesicles.

The course which vesicles run varies in different cases: either the wall gives way and the contents escape, or the fluid is absorbed and the wall remains as a fine dry scale; or there is an increase in the formation of pus cells, and the contents become yellow and entirely purulent. Sometimes fresh secretion occurs, and the walls of the vesicle are thickened, giving rise to flat crusts of a yellowish-brown color. On a surface where vesicles have been formed there often takes place for some time an exudation of serum in the form of drops without any envelope of epidermis.

*Bullæ*, or blebs, only differ from vesicles in respect to size; the line of demarcation between them is arbitrary. When they exceed a lentil-seed in size they may be called bullæ. The contents of blebs are either clear and colorless or yellowish, or they are turbid and purulent, or they are red from an intermixture of blood. In size and shape they vary extremely: they may attain a diameter of four or five inches; they are round, oval, polygonal, or semicircular. Some bullæ are surrounded by a red halo, and others have no such boundary. They are seated between the mucous and horny layers of the cuticle, and are often due to the coalescence of several vesicles standing close to each other. They undergo exactly similar changes to those experienced by vesicles.

*Pustules* are elevations of cuticle with pus under them. In some the upper layers of the cutis are involved, in others the cuticle only is affected. The latter usually begin as vesicles, and a distinction has been made between these and the others, based on their relative depth; but this cannot be maintained. Their color is yellow; but from an admixture of blood it often becomes darker, and by the presence of sebaceous matter it may be somewhat lighter. Several varieties of pustules have been described. *Achores* are small round pustules, not much elevated, but with comparatively large inflamed bases. They are commonly near together, and frequently situated on the face. They leave thick irregular-shaped scabs, like dried honey, which consist of pus and sebaceous matter.

*Psydraciæ* are larger than *achores*, not always rounded in outline, containing pus in considerable quantity. They dry into more or less greenish crusts, and are common on the extremities. They are often seated in the hair follicles.

*Phlysiaciæ* have a more elevated hardened base, are filled with pus and more or less blood, and end in brown or blackish crusts.

Pustules are often umbilicated at first, but when they become distended the central depression disappears.

*Squamæ* or *scales* (a name given by Willan to one of his orders) are smaller or larger particles or plates of cuticle which are dry and effete, and readily separated from the subjacent cutis. They vary extremely in size, thickness, and color. There is sometimes but little or no change apparent in the skin from which they are separated, or it is thickened, reddened, and disposed to crack.

*Macula* is a term sometimes used for any change in the normal color of the skin which does not extend to the whole surface. The color of *maculæ* is either some shade of red, or white, gray, yellow, blue, brown, or black; the size varies

other diseases, febrile and non-febrile. I have seen it during as well as after scarlatina, and occasionally in connection with other exanthemata and whooping-cough. It is not unfrequently combined with other skin affections. With erythema I have already spoken of it. Vesicles and bullæ are sometimes developed on the wheals; this combination may be either considered as urticaria with herpes, miliaria, or pemphigus, or it may be called urticaria miliaris, vesiculosa, or bullosa. Lichen urticatus of Willan is a form of disease in which pale papules about the size of hempseeds at first appear, are developed later into ordinary pomphi, and again subside into papules and disappear, leaving for some time a dark stain. In children it is very common to see urticaria combined with prurigo; an eruption which begins in the form of small pomphi is changed after a few days into papules of prurigo; this combination is described by M. Hardy as pruriginous strophulus. Sometimes the eruption appears as erythema fugax rather than as urticaria. It is a very obstinate affection, and one which very commonly attacks children from the age of six months to three or four years. It will be again referred to when speaking of strophulus.

*Diagnosis.*—This is generally easy. Most of the different forms of *erythema* are not accompanied with tingling and burning. Erythema fugax cannot, however, always be distinguished from it, as the two diseases run into each other. When urticaria involves the greater part of the surface, it occasionally resembles scarlatina or measles. There is, however, more tingling and burning, and at some parts very distinctly elevated patches will be met with. There is not the coryza and cough of measles, nor the angina or elevated temperature of scarlatina. From *erysipelas* of the face it is distinguished by less redness, more subcutaneous swelling, and œdema. The wheals sometimes look so translucent

*Rhagades* are long cracks in the integument, which occur either in the cuticle alone, or in it and the cutis together. They occur in parts where, with brittleness of cuticle or infiltration of cutis, the skin is subject to stretching.

*Crusts* are produced from the drying of serous, purulent, or bloody exudation. Serum alone produces flat brownish crusts; sebaceous matter alone, or mixed with pus, dries into yellow honey- or gum-like crusts. Dried pus has a greenish tint, whilst an admixture of blood gives it a blackish color. The thickness of a crust varies according to the duration and rapidity of the exudation.

*Cicatrices* or *scars* are found where there has been a loss of cutis and healing. They are distinguished by a smooth-shining surface, by loss of pigment, hair and hair follicles, and have a very firm consistence. The skin of cicatrices has no papillæ and no glands. Scars assume a great variety of aspects, chiefly dependent on circumstances which attend the healing of the ulcers from which they arise, as well as on the depth to which ulceration has extended. Scars occur after some forms of syphilitic tubercle and lupus, when there has been no previous ulceration, but merely interstitial absorption.

## CHAPTER V.

### ÆTIOLOGY.

CONSTITUTIONAL AND LOCAL CAUSES.—WANT OF CLEANLINESS.—IRRITANTS.—  
OCCUPATION.—CONTAGION.—AGE.—HEREDITARY TRANSMISSION.—TEMPERA-  
MENT.—DIET.—CLIMATE.—NERVOUS EXCITEMENT.—POVERTY.

A CERTAIN number of morbid conditions of skin are due to internal general causes which influence the whole system, others are due to causes acting mainly on the skin alone. Under the former category (the symptomatic diseases, as they may be called) the most striking examples are the acute specific fevers, scarlatina, measles, and the like. Besides these; in albuminuria, purpura and prurigo are occasional symptoms; in jaundice, a yellow discoloration of the skin is always a symptom; whilst syphilis, scrofula, and the cancerous diathesis have each their symptomatic cutaneous affections.

Then diseases of individual internal organs may lead to skin disease. Urticaria, eczema, acne, and different pigmentary affections are sometimes due to disease of the liver, the sexual organs, and the kidneys. Menstruation, pregnancy, and dentition are each liable to be attended with symptomatic skin affections. The precise manner in which the internal disease is connected with the cutaneous malady, unfortunately, we are not in a position to explain.

There are several diseases which some authors ascribe to a common diathetic condition which they call *dartrous*, as I explained in the chapter on Classification.

As the skin is a great emunctory organ, it may naturally be expected that from neglect of its functions the general

health will suffer; want of cleanliness allows the pores of the skin to be obstructed, and in this way throws extra work upon the kidneys and the glands of the alimentary passages; it acts also more directly upon the skin, by allowing the accumulation of acrid secretions, which themselves irritate as well as favor the development of pediculi and vegetable fungi, causing distinct diseases, such as prurigo, impetigo, scabies, and favus.

Eczema is one of the diseases especially due to irritants, lichen is another; this is exemplified by the diseases to which cooks are liable; also by so-called psoriasis of washerwomen, which is really an eczema; by grocers' itch, which is either eczema or lichen; a similar condition is caused by the use of strong acids in a variety of trades, by the saccharine matter of beer in potboys, by the dust and lime in bricklayers. From the use of arsenic in the form of arsenite of copper (emerald green) in the manufacture of artificial leaves and of paper-hangings, a rash is produced on the fingers and elsewhere; it either takes the form of a diffuse erythema, or else small and crowded vesicles like eczema, or papules which grow flatter and wider by contact with an opposed portion of skin, or of pustules which run into ulceration and gangrene. On the scrotum peculiar ulcers have been described; they are small and shallow, with even surface and thin soft edge, quite circular and sharply cut, moistened with a scanty light-yellow discharge. (See Dr. Guy's Report in the 5th Report of the Medical Officer of the Privy Council, page 148.) Ulcers similar to these form on the face and elsewhere, and leave scars very much like those of smallpox.

A certain number of diseases are more or less contagious. All the parasitic diseases, and those included in my second class, have this property. In deciding whether a disease can be propagated by contagion, it must always be remembered that no disease is so contagious as to be communicable to

every person subjected to its influence. One attack of many contagious diseases renders a patient insusceptible of the same disease during the rest of his life. Again, there are some persons who are proof against the influence of one or more of the most contagious diseases, or the same person may resist contagion at one period of his life and succumb to it at some future period.

One contagious disease is communicable most readily to children, another to adults, and another to old persons. For instance, common ringworm is not met with on the heads of adults, pityriasis versicolor is rarely met with in children, and prurigo from pediculi is not very often seen in persons under the age of forty.

There is a form of impetigo which is contagious; and this property does not depend on the presence of a parasite; though impetigo of the occiput is usually due to pediculi.

The influence of *age* on skin diseases requires a short notice. In infancy and childhood the prevalent diseases are eczema, intertrigo, strophulus, prurigo, lichen, rupia, impetigo, and tinea tonsurans. The acute specific diseases also usually occur at this period of life. Towards the age of puberty, and in young adult age, are seen psoriasis, acne, lupus, tinea decalvans, favus, and pityriasis versicolor. In old age, prurigo, pemphigus, and ecthyma are especially frequent. Scabies occurs at any age; psoriasis, eczema, and lichen may also occur at any age. Sycosis is only seen in male adults. Syphilides occur at any age.

Amongst the diseases often due to *hereditary* transmission stand out most prominently psoriasis, ichthyosis, leprosy of the East, and syphilides.

The influence of temperament is observable on skin diseases. The lymphatic temperament is most prone to eczema and impetigo; the sanguine, to psoriasis; the nervous, to

prurigo, lichen, and urticaria; the bilious, to various discolorations, as ephelis and lentigo.

*Diet* has some effect in inducing skin disease by deranging the stomach and bowels, and thus setting up reflex irritation, or by being deficient in some nutritive elements, or by being too rich or too azotized. Urticaria, erythema fugax, and strophulus are often produced in the method first named; ecthyma, scurvy, and rupia, in the second method; psoriasis and eczema, sometimes in the third way.

*Climate* and *season* exert an influence on the diseases of the skin—lichen tropicus occurring mainly in hot climates; bucnemia, or elephantiasis of the Arabs, also. Some diseases are prone to appear at the commencement of warm weather in the spring, and to disappear on the approach of cold weather; psoriasis and eczema sometimes exhibit this peculiarity. Pellagra also, to a marked degree. Cold dry winds aggravate eczema and lichen; exposure to the sun causes erythema, eczema, and ephelis.

*Nervous excitement* may induce urticaria; fright has been known to cause eczema, and anxiety has caused loss of color in the hair.

*Poverty* acts in a variety of ways to encourage skin diseases—by unsuitable diet, by inducing neglect of cleanliness, by increased exposure to contagion, and by impurity of the air breathed.

There is one thing which is frequently regarded by mothers and the public generally as the cause of numerous cutaneous diseases; I refer to vaccination. How far is this popular opinion founded on facts? No doubt many children become eczematous very shortly after vaccination; but then it must be remembered that vaccination is usually performed at an age when eczema is very apt to occur without vaccination. In many families nearly every child is liable to eczema during the whole period of primary dentition, whether it is vac-



inated or not. The slight febrile disturbance attending dentition brings out eczema, and the slight disturbance of health caused by vaccination is also sometimes sufficient to determine the occurrence of an attack of eczema in children naturally predisposed to it.

Strophulus, in the same manner, may be thus determined; and I have several times met with cases of pruriginous strophulus which appeared to have been excited by vaccination. Impetigo I have also seen thus caused; and in one case recurring pemphigus dated its origin to a few weeks after vaccination, performed at the age of eight years. A case of pityriasis rubra also occurred immediately after re-vaccination in a girl aged fourteen years. These last two cases may be looked upon as coincidences; but they are, I think, worthy of record. There is nothing improbable in the notion that the introduction of a virus like that of vaccinia into the blood of an unhealthy person may so unsettle the health as to lead to subsequent cutaneous eruptions; just as an attack of measles, an attack of variola, or even of varicella, may have this effect. The cases in which this occurs are, however, so few as to form no argument against the general adoption of vaccination, but probably supply sufficient reasons for carefully attending to the health of the subjects submitted to vaccination, as well as to be careful not to take vaccine virus from children of unhealthy constitution. On this latter head the evidence is not very clear, but it would tend to show that the blood, at any rate, of a syphilitic child, if not the vaccine lymph from it, may lead to syphilis, although *à priori* one would be loath to believe in the possibility of such an occurrence. There is no evidence that scrofula or rickets can be inoculated; but it is better to err on the side of caution, and to avoid taking vaccine from children decidedly scrofulous or rickety.

## CHAPTER VI.

### DIAGNOSIS AND THERAPEUTIC PRINCIPLES.

#### IMPORTANCE OF A COMPREHENSIVE VIEW OF EACH CASE.—PROPHYLAXIS.— INTERNAL AND LOCAL REMEDIES.

THE diagnosis can generally be made by means of the objective phenomena or physical signs alone, without any assistance from the history or the subjective symptoms. The history and the patient's own sensations will prove useful in the way of confirmation; and in some complaints, such as urticaria or erythema fugax, the signs are evanescent, so that at the time of observation there may be none present, and then the history must be relied on.

In all cases of doubt it is important to examine the entire surface of the body. The different appearances presented in different parts, and the localization of morbid processes, will usually clear up the case, when the observation of only the most readily accessible parts of the surface has left the diagnosis in considerable doubt. If possible, the examination should be made by daylight; it is otherwise impossible satisfactorily to judge of color. The temperature at which the examination is made will influence the appearance of eruptions—a high temperature rendering all inflamed or congested parts more colored, and a low temperature having the contrary effect. The circumstance of a patient's having recently taken a hot or cold bath will seriously modify the appearances presented by his skin. Amongst the points to be ascertained are, whether the skin generally is smooth moist, and glistening, free from scales and crusts, rough and

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dry, or covered with scales and crusts. The normal lines and furrows should be observed, to see if they are too deep or too superficial, too near each other or too far apart. The pores, also, should be looked at, to see if they are visible and open, or obstructed. The condition of the hair and nails should also be noted. The color should next be observed, generally and locally; whether pigment is excessive, defective, or irregularly distributed, or whether the skin is unusually pale or red. If there is undue redness, it must be noted whether this is removed by pressure or not. The thickness of the cutis must be observed by taking up a fold of the skin between the thumb and finger. The presence or absence of marks of scratching should be especially noted. Scratching alone, if severe and constant, will bring about not only excoriations, but redness of an erythematous nature, papules, and even vesicles or pustules, as well as a discoloration, from the deposits of pigments. The excoriations themselves may be described as exhibiting three grades. (1.) The upper layers of cuticle only are torn off in the form of branny scales. (2.) There is a red moist spot, which is the deeper layer of cuticle (the rete mucosum) laid bare. This soon exudes a thin yellowish crust, the blastema to form new cuticle. (3.) The corium itself is wounded, and blood is extravasated, especially from the papillæ, and dries up into the form of reddish-brown or black crusts. If the skin is diseased before the scratching, the appearances are a little modified. In prurigo the prominent papules get torn first, and bleed; in eczema, the vesicles; and in psoriasis, the scaly patches.

In the last place, as elements in forming a diagnosis, the form, number, arrangement, and localization of the primary and secondary lesions of the skin should be noted. An attempt must then be made to determine which of these lesions gives the character to the prevailing eruption; and the characteristic lesion will usually be discovered, especially

at the advancing margins. The results of previous treatment must also be borne in mind. The influence of age, sex, and occupation of the patient should also be considered. In this manner a comprehensive view will be obtained of the whole case, so far as the integument is concerned. Before proceeding to treat the patient, regard should be paid to the pulse, to the digestion primary and secondary, to the respiration, to the urine, and, in females, to the uterine functions.

The question will then arise, is the case one of the parasitic class, or an acute specific infectious disease, or a syphilide? The general and specific characters of these three classes will be given in detail in the chapters relating to the several diseases of each class. If it is not one of these three, it must be referred to one of the following orders: exanthemata, vesiculæ, pustulæ, squamæ, hæmorrhagiæ, papulæ, pigmentary diseases, diseases of sebaceous glands, hypertrophies, degenerations, or heteromorphous exudations.

Having diagnosed the case accurately, the question of treatment may then be profitably entertained.

Although much progress has been made in the therapeutics of skin diseases within the last few years, there is still much more to be accomplished before we can be said to have "transferred all diseases of the skin from the incurable to the curable class." More accurate researches are required as to the causation of these diseases, and the chemistry of the fluids of the body in these affections requires to be better understood.

One school of dermatologists almost discards the use of local applications in the treatment of skin diseases, whilst another attaches the utmost importance to them, somewhat undervaluing general treatment and internal medicines. As is usually the case, the truth lies between these extremes.

A knowledge of ætiology will often be the most valuable guide to treatment. Even in diseases produced by local

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causes there is, at the same time, often a constitutional condition which makes the patient susceptible to the local influence, and this requires treatment; and in diseases due to constitutional causes, especially when they are chronic, local applications are almost essential to get rid of the morbid conditions.

The combination of general and local remedies is in many cases desirable. In former times there was a notion very prevalent, which is not yet quite exploded, that it is dangerous to cure some chronic skin diseases too rapidly, for fear of "driving them in," and setting up diseases in internal organs by metastasis. This idea has originated from the fact that, often coincidently with an attack of severe internal disease, many chronic skin diseases disappear in part or wholly. It does not necessarily follow from this fact that the acute disease is the effect of the disappearance of the chronic one; it is probably the case that the disappearance of the skin affection is an effect rather than a cause, or else the two results are produced by some common cause. We know of no remedies which act so powerfully on skin diseases that we run the risk of curing them too quickly. The only disease in which patients sometimes feel their skin worse when they themselves feel in the best health, is psoriasis. Cases of eczema often occur in patients who also suffer from chronic bronchitis. When their bronchitis is worse than usual, their skin is often better; when their skin is very troublesome, the bronchitis is more or less in abeyance. There is not, however, any proof that the treatment suitable for the eczema is liable to cause the bronchitis; it will sometimes have the effect of curing both together. Infants with general eczema sometimes become rapidly emaciated, suffer from diarrhoea, become tuberculous, and die; when their health fails, the eczema often becomes much better. I believe the disappearance of the rash is an effect, rather than

a cause in such cases. The improvement in the skin affection is due probably to want of blood in the skin, from progressive cachexia, of which the eczema was an early symptom. In the chapter on eczema this subject is again referred to. It is one upon which further careful observation is required.

The idea was, at one time, almost universally entertained, and even now very extensively prevails, both amongst medical men and the public, that the great majority of skin diseases are an indication of some abnormal condition of the blood, which nature is attempting to throw off by the skin. With this view medicines are given which act on the secretions so as to eliminate the morbid material from the system; diuretics, purgatives, diaphoretics, and cholagogues have been often given with this object. There is probably some truth in this theory with regard to a few diseases, but experience of late years tends rather to discountenance than to lend support to the doctrine as generally applicable.

In the way of prevention, much may be done by attention to hygienic conditions, especially pure air, suitable diet, temperance, regular hours, and cleanliness. The regular use of a cold bath every day is of great benefit; friction after the bath is also very important. The hot-air or Turkish bath, now so much in vogue, may be useful in patients who do not take enough exercise, or eat more than their system requires. It no doubt opens the pores of the skin very effectually, and tends to promote in the skin the full performance of its functions. The diet should be plain and nutritious, not too rich, and a moderate quantity of fresh vegetables should be eaten. Persons with a hereditary tendency to struma should eat freely of animal food, and if their nutrition at all fails, cod-liver oil will do them good. In patients with a tendency to psoriasis, the diet should not be too azotized nor too fatty. Pork is not to be recommended to them, and all

indigestible food should be avoided. Attention should be paid to the due performance of the hepatic, the renal, the uterine, and other functions.

As curative agents, the chief internal remedies are: 1. Arsenic in chronic squamous, vesicular, and papular diseases. 2. Antimony in acute attacks of the same diseases. 3. Quinine and iron in pustular diseases, and other cases attended with debility. 4. The vegetable bitters, with a mineral acid, in a great variety of cases. 5. Alkalies. 6. Colchicum in rheumatic or gouty subjects. Cod-liver oil is of the utmost service in strumous patients, and in many others badly nourished. In the syphilides, mercury and iodide of potassium are the chief drugs. Chlorate of potash is also of service, with or without dilute nitric acid, in congenital syphilis. In lymphatic scrofulous subjects sulphur is sometimes useful. The tincture of cantharides is occasionally employed in squamous diseases. Purgatives are an important adjunct to other treatment. When the secretion is very free in eczema, rather strong saline purges, or senna and salts may be given; but, as a general rule, a simple alterative purge of blue pill and colocynth will be best.

Of local applications, baths must be specially mentioned: some of the chief are named in the formulæ at the end. The inunction of oil, glycerine, or lard, alone or with mineral salts, iodine, sulphur, or other substances, is important.

Various preparations of tar and creasote are useful in psoriasis and eczema. Simple water dressing, or demulcent applications, such as the decoction of mallow, almond emulsion, and so forth, are of service in the acute stages of many diseases. A very useful material, much used by Hebra, is soft soap; it is of service in squamous diseases, or diseases attended with thickening of the cutis, as psoriasis, chronic eczema, and lichen; also in the parasitic diseases. Solutions of potash are used much in the same way. For the removal

of new formations and hypertrophies, and as applications to ulcers, caustics are employed. Of these the strong nitric acid, the acid nitrate of mercury, chloride of zinc, potassa fusa, potassa cum calce, nitrate of silver, chromic acid, glacial acetic acid, and arsenic are suited for different cases. Blistering fluid of glacial acetic acid and cantharidin is also useful in tinea tonsurans, in circumscribed eczema, and lichen.



## CHAPTER VII.

### EXANTHEMATA.

ROSEOLA.—ERYTHEMA.—“RUBEOLA NOTHA.”—URTICARIA.—PELLAGRA.

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### ROSEOLA.

(Nelligan's Atlas, Pl. II., Figs. 5, 6.)

*Roseola* is an affection more important from the diseases with which it may be confounded than on its own account. It stimulates measles in some cases, in others it resembles scarlatina, whilst in a third set of cases it is like the rash of measles one day, and that of scarlatina the next.

One form of roseola frequently precedes the eruption of smallpox, and has been called *R. variolosa*. It appears on the second day of the disease, commonly on the extremities, and especially near the flexures of the joints. It is said to be even more common in smallpox when inoculated than in natural or modified smallpox. The eruption may occur as a diffused redness, or in the form of distinct spots. It does not last more than from twelve to twenty-four hours. A diffused redness is, in exceptional cases, observed on the abdomen, and on the inner side of the thighs, which spreads nearly to the knees. It disappears in two or three days, when the proper eruption of smallpox makes its appearance on all parts of the body except those thus previously involved. *R. variolosa* has been occasionally mistaken for scarlatina. The rash is neither so scarlet nor so punctiform as that of scarlatina, nor does it appear so early in the face.

The peculiar pain in the back, so generally felt in smallpox, will aid in the diagnosis.

Roseola also not uncommonly follows vaccination on about the ninth or tenth day. It usually begins in the arm, and may spread to other parts or be limited to that region.

Roseola often occurs in children with but little constitutional disturbance. It is characterized by rose-colored spots and mottling. The rash cannot always be distinguished from measles. In other cases it bears a close resemblance to scarlatina. Some of the most accurate observers assert that it is sometimes impossible, by the rash alone, to distinguish one form from measles, and another from scarlatina. The concomitant symptoms, the amount of fever and other constitutional disturbance, must be taken into consideration. The spots are not elevated, and the rash does not make its first appearance at the roots of the hairs, as is usual in measles; and it is more frequently limited to one limb or to the trunk. It usually disappears in twenty-four hours, but may last several days, and is liable to relapses. It is not so scarlet as that of scarlatina. It is not contagious, but sometimes attacks, nearly at the same time, several inmates of the same house, subjected to common external conditions. It would appear occasionally to be epidemic. The treatment required is very simple, and must be regulated by the concurrent symptoms.

*Causes.*—Gastric disorder is a common cause. It is more common at the beginning of hot weather, hence sometimes called *R. æstiva*. Drinking cold water when the body is much heated is another cause. Dentition is a common cause in children. It is more frequent in children than in adults, and is then called *R. infantilis*. It is rather more common in females than in males.

Another form of roseola has been called *R. autumnalis*, although it may occur at any season of the year. It is ac-

ters of papules, or on other parts of the surface, as on the extremities or the face, bluish-red tubercles resembling acne; some of them become purulent, others dry up and disappear, leaving a dark-colored round spot just as in ordinary acne. The epidermis of parts between the eruption is raised in the form of branny dull-colored scales, giving the patient a peculiar cachectic appearance.

Hebra expressly states that he has not confounded under this head cases of pityriasis tabescentium, but thinks it possible that both of these diseases may depend either on an increased secretion of sebaceous matter, or on a morbid development of epidermis and an infiltration of it with sebaceous matter.

Each papule of lichen scrophulosus is situated at the orifice of a hair follicle, and consists of a collection of epidermis, which can be fully separated from its bed without causing blood to flow. The cells forming these small masses of cuticle resemble the ordinary horny epidermic cells, or at most only differ in exhibiting a larger number of fat-globules. After the removal of the hemispherical epidermic accumulation the orifice of the hair sac is visible to the naked eye, and exhibits in its immediate vicinity a faint redness and slight elevation.

The prognosis in this disease is good, provided the patient can be placed in favorable circumstances to arrest the course of the constitutional malady. The treatment recommended is the free use of cod-liver oil both internally and externally. The oil should be at first rubbed in four times a day, and a woollen dress should be worn, and be saturated with oil; after a time it may be used twice in a day.

*Lichen ruber* is a rare disease of which Hebra has seen only fourteen cases, of which thirteen were in men and one was in a woman. At the outset are to be seen isolated papules of the size of millet-seeds, covered with thin scales. They

well-drained house; she had been at a school where several of the scholars had been affected in exactly the same way. Two months previously her aunt had also been similarly attacked. When I saw her, there was on her chest and abdomen a distinct punctiform rash, not elevated, disappearing on pressure, in color less scarlet than the rash of scarlatina, less purple than that of measles, nor was it arranged crescentically. On the face were a few very slightly raised small papules, nearly of the color of skin, which had been red on the previous day, with normal skin between them. The skin was very little warmer than usual, and there was no notable quickening of the pulse. The tongue was a little redder, and the papillæ at the tip a little more prominent, than in health; there was no sore throat, but slight glandular swelling of the neck. Smallpox and scarlatina prevailed much at the time.

At the early part of the year 1864, Dr. Babington called public attention to similar cases, which he proposed to call rubeola notha; the term epidemic roseola appears to me to be preferable.

Dr. Wilks has recently referred to a circumstance which I have been able frequently to confirm, namely, that patients who have undergone surgical operations occasionally present a rash having the characters of scarlatina, with slight soreness and injection of the fauces, but not spreading to other patients, or followed by the usual sequelæ of scarlet fever. I have notes of cases of this kind which I observed in University College Hospital in November, 1853.

The disease is probably not infectious, but depends on some atmospheric condition, for it appears usually to prevail when other zymotic diseases are rife; its occurrence is probably determined by local causes in certain houses, or by peculiarities in diet.

## ERYTHEMA.

(Neligan's Atlas, Pl. I.)

*Erythema* is a term used for several distinct affections of the skin. They are all characterized by redness; some of them, however, are due to hyperæmia or injection of the vessels simply, whilst others are attended with exudation into the skin. Some are due entirely to local causes, others to constitutional disturbance. Hebra divides the forms of erythema into *congestive* and *exudative*, and under the first of these heads he describes the idiopathic, which are purely local, and the symptomatic, which are constitutional.

The local forms owe their origin to a variety of causes. One cause is the friction of two opposing folds of skin, with an accumulation of the secretions (*E. intertrigo*). It is very common in the groins and necks of fat children and women. The parts affected are much reddened, and there is sometimes an exudation of serous or even purulent fluid from them. The treatment required is to keep the parts very clean by frequent washing, to apply an astringent wash such as lead lotion, and to dust the parts with an absorbent powder, such as starch or the common violet powder; if there be much discharge a little oxide of zinc may be added to the powder.

Pressure is a common cause of erythema; it may be excited by tight bandages or by posture, which will cause erythema on the parts receiving the weight of the body. This form of erythema is often a prelude to bed-sores. Friction is another cause of erythema. The application of heat gives rise to it before causing vesication. Acrid substances applied to the skin, such as mustard, cantharides, or other irritants, will produce erythema. The saliva will often cause erythema around the mouths of children, especially when cold dry winds prevail. There is also a chronic form of

erythema, which is common on the face, and about the lips and noses of children. This variety is often accompanied by cracking, which is very irritable and troublesome. Cold will often give rise to erythema. An unbroken chilblain is an instance of this; the technical name for it is *E. pernio*. The best local treatment is friction, with a stimulant liniment, such as one part of tincture of cantharides with three parts of soap liniment. General treatment is required to improve the circulation, and care should be taken that the stockings and gloves are warm and large enough. In some forms of ophthalmia and coryza the secretions cause erythema of the adjacent skin, and in cases of incontinence of urine and feces these excreta have the same effect.

*Erythema læve* is a term used to designate an affection which is really a combination of erythema with œdema. The skin is red, tense, and glistening, and the affected limb brawny. It is common on the legs of old people. It is dependent usually on venous obstruction or dilatation, or on dropsy from renal, cardiac, or other disease. The congested state of the skin favors exudation into the subcutaneous tissues. This form of disease should be treated by raising the limbs, acupuncturing the thighs, and applying a solution of nitrate of silver, sixty grains to the ounce, on the reddened part. Diuretics and purgatives may be required for the dropsy. This variety may, like some of the others, go on to the formation of bullæ and subsequent sloughing of the skin or even the cellular tissue.

Erythema from pressure must be treated by relieving the cause as far as possible. This may be done by changing the patient's position, by the use of cushions, to relieve the parts which are suffering, or the use of water or air beds or cushions, which distribute the pressure over a larger area, and enable the patient to change the part which receives the weight of the body. The parts must be kept very clean,

which are white and somewhat resemble smaller pomphi of urticaria, and appear occasionally on the loins, shoulders, and arms of children about a year old. After remaining hard and elevated for about a week, they gradually disappear. This form often accompanies strophulus confertus. All these varieties are liable to terminate in desquamation.

The treatment of the four preceding varieties is identical. The diet of the child must be strictly regulated; it will often be found at fault. A mild aperient, such as rhubarb and magnesia, should be given, and if there be febrile excitement, small doses of citrate of potash with three or four minims of ipecacuanha wine, and tincture of hyoscyamus may be given. If the irritation is troublesome, warm baths, with gelatine about half an ounce to the gallon, and carbonate of soda one drachm to the gallon, may be given. A lotion, consisting of liq. ammoniæ acet. ℥ij., Ph. Lond., Sp. vin. rectificati 3ss, and aquæ camphoræ ℥iv, will sometimes be useful.

The gums may require to be lanced, and in case of diarrhoea, chalk mixture should be given.

*Pruriginous Strophulus* is a name given by M. Hardy to a very troublesome affection met with most commonly in children of from six or eight months to five or six years of age. It is characterized by the appearance of moderate-sized papules, usually isolated, rarely confluent; some are of the color of the skin, others are red, and occasionally they are surrounded by a patch of erythema. These papules are the seat of intense itching, severe in the day but worse at night; they are, as a consequence, violently scratched and prevent sleep. The papules frequently bleed, and are surmounted by a black scab such as characterizes prurigo. It is not uncommon to see pustules of an ecthymatous character among the papules, which often mislead the practitioner as to the nature of the disease. The parts chiefly affected are the back of the trunk, the thighs, the arms and face. By causing sleepless-

roseola annulata, which it most resembles. It runs its course usually within a fortnight.

*Erythema nodosum* is characterized by oval or roundish red patches, from half an inch to an inch and a half in diameter, distinctly elevated, and very tender. The color disappears on pressure. This eruption is commonly preceded by febrile disturbance for two or three days. Each patch lasts from a week to ten days, and a succession of patches may occur every day or two. The eruption usually ceases at the end of about a fortnight. It is most usual in young adults, especially females. When the disease occurs in elderly persons, it often runs a more chronic course, successive crops of eruption appearing for as long as six weeks or two months. The patches, on their first appearance, are of a bright red color, but in the course of two or three days they become of a violet tint. Exposure to cold will give this appearance to more recent patches. They subsequently become yellow, like a fading bruise; hence a name given by some authors, "*Dermatitis contusiformis*." Several patches may run together, and give rise to a large reddened elevated surface, very tender to the touch. The commonest seat is the front of the lower limbs, below the knee, and the outer aspects of the forearm; it is more rare on the thighs and above the elbows. This affection may be mistaken for erysipelas by inexperienced observers, or for a threatening abscess. The margin of an erysipelatous patch is raised nearly as much as the centre, whilst a patch of erythema nodosum is distinctly elevated in the centre, and gradually subsides to the level of the surrounding skin towards its circumference. The hardness of erysipelas is brawny and superficial; that of erythema nodosum gives the sensation of something beneath as well as in the skin. The bluish tint of patches which have existed several days is very distinctive. There is an obscure sense of fluctuation in these patches from the



presence of serious affections: they must be carefully distinguished from abscesses: the history of their appearance, their number and situation, will usually prevent this mistake.

*Erythema tuberculatum* and *E. papulatum* differ from *E. nodosum* in the size of the patches. When they have about the diameter of a fourpenny or threepenny piece they are described as *E. tuberculatum*; when about the size of small split-peas, *E. papulatum*. The eruption may remain in distinct spots, or coalescence may take place, forming patches of some size. This form of eruption makes its appearance in papules or tubercles, varying in size from that of linseed to that of a bean, of a dark blue or brownish red color, and occurs in greater or less amount. The immediate vicinity of these elevated spots appears at first reddened, but this lasts only a short time, at most twenty-four hours, and leaves behind no discoloration. Many patients complain of slight burning or itching, others of a sense of stretching in the affected parts. There is no distinct elevation of temperature, and no general febrile symptoms.

These eruptions are more common in the spring and autumn than at other seasons. The commonest seats of *E. papulatum* are the backs of the hands and feet. In severer cases it extends to the forearms, legs, arms, and thighs; still more rarely to the trunk and face. It often resembles chilblains when confined to the fingers, as it is sometimes. The eruption varies from one to four weeks. Hebra states that *E. tuberculatum* is usually a later stage of *E. papulatum*, the patches becoming pale after a few days.<sup>1</sup> Sometimes a second eruption appears outside the first ring, giving rise to a second ring which has been called erythema iris. In some cases the eruption takes a serpentine form, *E. gyratum*, and in others *E. marginatum*. This last term

is used by others to designate a chronic affection sometimes met with in elderly persons much out of health. It is characterized by patches, which are rounded and considerably elevated at the margins, which are red. The centres are of a light fawn color, and somewhat indurated. (One case which came under my notice was that of a woman, aged 56 years; there were several patches on the legs, chest, and shoulder, from half an inch to an inch and a half, presenting an appearance such as is above described. One on the leg was slightly excoriated in the centre. The eruption had existed several years, and no treatment appeared to be of any service.)

All the forms of erythema are liable to be followed by desquamation.

*Treatment.*—This is very simple. An aperient, simple diet, and rest are indicated. Most commonly decoction of cinchona or quinine, with or without a mineral acid, will be useful. Warm fomentations when the parts are very painful will be found to give relief; and the parts affected should be kept in an elevated position.

There is no well-marked line drawn between roseola and those forms of erythema which are symptomatic and simply congestive. The term erythema is however more comprehensive, and includes certain superficial inflammations of the derma due to local as well as to symptomatic causes, accompanied with exudation into the derma.

Erythema and some forms of roseola are more commonly seen in rheumatic subjects than in other persons.

## URTICARIA.

(Neligan's Atlas, Pl. II., Figs. 1, 2, 3, 4.)

This disease derives its name from the Latin *urtica*, a nettle, because the eruption by which it is characterized resembles that caused by the sting of the common nettle

(*Urtica urens*). It is also known popularly as the nettle-rash. The distinctive marks of the disease are the sudden appearance of *wheals* or *pomphi*; with a sensation of burning and tingling, and their sudden disappearance usually without desquamation. The eruption takes place without any premonitory symptoms, or is preceded by a feeling of distress and malaise, or by febrile disturbance. The whole surface of the body is sometimes attacked at once, or, as is more usually the case, certain parts only are involved. The whole eruption may come out suddenly, or the wheals may appear in gradual or rapid succession. Wheals vary much in form, size, and color: they are round, oval, in the form of stripes, or of irregular shape; they are red, pale, or purple; they vary in length from the sixth of an inch to several inches. There is sometimes a depression in the centre. The wheal is surrounded by a red margin; in some cases a small wheal is surrounded by extensive redness; or each wheal is surrounded by a narrow halo; or several wheals exist on a large patch of redness; or there is very extensive, almost general, redness and tingling, with but few wheals appearing, the number being increased by scratching. In other words, erythematous redness and pomphi are combined in different degrees in different patients. The eruption disappears without leaving any trace; desquamation is extremely rare unless it be from scratching. When urticaria attacks the face, the mammæ, or the scrotum, it often causes subcutaneous œdema. The health is sometimes quite undisturbed; at other times there are decided constitutional disturbance, loss of appetite, a coated tongue, and fever. The burning and tingling which accompany the rash are often increased at night, or periodically at some hour of the day, or by the least exposure to cold, as during the act of washing or undressing, or in other cases by exposure to heat. Sometimes urticaria makes its appearance shortly after a meal, and is accompanied by un-

easiness at the epigastrium, a sense of oppression, followed by nausea and vomiting; and the eruption may last only a few hours or several days, successive crops making their appearance. This form of the disease is sometimes ushered in with faintness, or even complete syncope, the tongue may be swollen and the eyes puffed, in addition to the swelling of those parts of the surface which are affected by the eruption. In urticaria, though the individual eruption is always rapid in its appearance, the disease is often a very chronic one from the constant recurrence of the symptoms.

Many varieties of urticaria have been described; Willan made six—*U. febrilis*, *U. evanida*, *U. perstans*, *U. conferta*, *U. subcutanea*, and *U. tuberosa*. These are not distinct species, but merely one disease assuming different aspects. The febrile urticaria may be either *conferta* or not, and *U. tuberosa* only differs from other forms in the size of the wheals. *U. evanida* and *U. perstans* are chronic forms of the disease, the first being remarkable for the very short period during which each crop of the eruption remains, and the second for the comparatively long period, during which separate wheals remain, as for a week or more.<sup>1</sup>

It is sometimes found that moderate pressure or friction on the skin will cause wheals to appear. They shortly subside and disappear. If with a blunt point any figure or letter be traced it will quickly come out in relief on the skin, with great sharpness of outline.

There is a very good model of this in Guy's Hospital Museum. (See Guy's Hospital Reports; 3d series, vol. v. p. 191.)

These cases were classed by Willan with *Urticaria evanida*, because the wheels are transient, and he does not distinguish it from ordinary urticaria, in which wheals arise sponta-

<sup>1</sup> See University College Hospital Case-book, Vol. I. p. 300. M. A. H.

the ova are found in one cases which have been met with. In full examination of the linen had been resisted, were always like these creatures.

In persons of poverty there are sometimes contagious diseases not always usually to be peculiar and that a cause of disability is due to me to receive coptes another be with carried in person on person to dis is external before rid of easier them.

Persons of distaste that a

the neck, the stable, the use of the present condition of the staves, the Per- In com- her baths, at a ming, should be our fumigations in adult should of hypo-sulphite of acid. The animal must not be sometimes of ens have been of dilute nitric corrosive sublimation, recom-

11

es or compresses ment composed of tions, are useful

ment, according to be paid to the of the diet must with milk, white could be the staple of these, salt meat,

ices should be forbidden. In the old and and quinine are often indicated; if the pascovichium should be given. In some chronic will be found of much benefit, such as the nitre, decoction of broom, with the compound per and saltpetre. In other cases, free doses have been attended with marked benefit. When ssness and melancholia, morphia will be found service.<sup>1</sup>

varieties of prurigo demand a few moments' go *podicis*, or *pruritus ani*, is characterized by around the anus and on the perineum. The gh, and studded with papules, covered with and black lines from scratching. There is not serous discharge and exudation into the cutis, ning, and a condition resembling lichen agrius. ly in persons of advanced age and sedentary y be due to *ascarides* or hæmorrhoids. The be kept free by means of confection of senna or castor oil. Podophyllin has been strongly

The diet must be simple. Lotions of black ammoniæ acetatis, or unguentum hydr. oxidi donna and glycerine, will be severally found rent cases. It is a form of the disease which bstinate.

it occurs by extension from the preceding, or ffection. It differs in no respect from the other, tion.

*pruritus muliebris* is characterized by intense itch- rnal genitals of women. It may be confined extend into the vagina. On examination the exhibit no appreciable change; in others,

pruriginous papules are to be seen; in many others there is abrasion and oozing of serous fluid. It is said occasionally to lay the foundation of habits of masturbation. It is sometimes caused by pregnancy; it frequently occurs at that period of a woman's life when her catamenia cease. *Treatment* is the same as for *P. podicis*. In addition, exposure to heat must be avoided. Patients should sleep on mattresses, and use the cold douche.

Willan and Bateman described three other local varieties of prurigo. (1.) *P. preputii*, which is not in any sense a prurigo, but rather an excessive or abnormal secretion from the sebaceous glands around the glans penis. (2.) *P. pubis*, due to the presence of pediculi pubis. (3.) *P. urethralis*, which is not a skin affection, and is usually sympathetic with disease of the bladder, or arises from calculus.

## CHAPTER IX.

### SQUAMOUS DISEASES, OR SCALY ERUPTIONS.

#### PSORIASIS—PITYRIASIS—ICHTHYOSIS.

THIS constituted Willan's second order of skin diseases, and included under it lepra, psoriasis, pityriasis, and ichthyosis. I reduce the number of squamous diseases to three, by combining under one lepra and psoriasis.

#### PSORIASIS.

(Nelligan's Atlas, Plate X.)

*Psoriasis* (from the Greek  $\psi\omega\pi\alpha$  and Hebrew tsorat, a word signifying venom or malignity) is now appropriated since the time of Willan to a disease of the skin attended with an increased secretion of epidermic scales, together with some exudation into the cutis, causing a thickening of that structure, attended with little or no constitutional disturbance. The Greek term  $\psi\omega\pi\alpha \lambda\epsilon\pi\omega\delta\eta\varsigma$  was employed to define a scaly stage of scabies and also of eczema; and  $\psi\omega\pi\alpha \beta\lambda\alpha\omega\delta\eta\varsigma$  was used to designate the moist stage of eczema and impetigo or the humid tetter.

It is a convenient term to employ for a distinct and well-defined disease, including what Willan intended by lepra, or lepra of the Greeks, and all other varieties of skin disease, in which the cutis is reddened, thickened, and covered with an increased formation of epidermic cells, adherent to each other and to the skin, but rubbed off without much difficulty, and not characterized at any stage by vesicles, pustules, or ulceration.



Hardy, Bazin, and Duchesne recognize the identity of lepra and psoriasis, and use the latter name only. The German writers Fuchs, Riecke, Hebra, and Simon also make but one disease.

Psoriasis commences by the appearance of spots of the size of pins' heads, of a whitish color, which are due to accumulations of epidermic scales, heaped up on each other, and loosened from their connection with the cutis.<sup>1</sup> These spots, constituting *psoriasis punctata*, increase in size, sometimes slowly, sometimes rapidly, and acquire within a few days or after a longer period the size of a lentil and the appearance of drops of mortar. The disease is in this stage called *psoriasis guttata*. Simultaneously with the growth of the first points others of the same kind present themselves in the intervening spaces of skin. By the extension of the spots larger patches are produced, which, attaining the size of different coins—a sixpenny piece, a shilling, or a crown piece—have the name *Ps. nummularis* or *circumscripta*. After a while, as the disease goes on, different patches approach each other and become fused into one, giving rise to irregular shapes and sizes; thus, by the growth of existing eruptions and the appearance of fresh spots, a very large extent of the body may be involved; *psoriasis diffusa*. (One of Bateman's plates, *Ps. diffusa*, is really an eczema, plate xi. fig. 2.)

In cases where the eruption has involved only a limited extent of surface, the aspect of it may undergo various changes. In one case the epidermic scales are loosened and fall off, and leave bright red slightly elevated spots; whilst in other cases there is noticed only a partial desquamation, especially in the middle of single circular patches, giving

<sup>1</sup> Hebra states that they commonly originate at the orifices of hair-follicles.

rise to the *lepra vulgaris* of Willan or *psoriasis orbicularis* or *lepraeformis* of Hardy. I have repeatedly satisfied myself as to the correctness of this mode of explaining the production of the so-called *lepra vulgaris*. By the blending together of numerous smaller patches differently arranged, a variety of irregular forms are produced. When it takes a serpentine form, it is then called *psoriasis gyrata*. The very grotesque forms portrayed on Willan's 12th plate are seldom or never met with, but such appearances as are shown in Hebra's plate (3d part, plate vi.), are not uncommonly to be seen. Patches of *psoriasis* sometimes become inflamed, and the surface on which the scales have been formed exudes an albuminous secretion something like the chronic stage of an *eczema*. Cases sometimes present themselves in which it is difficult to say whether they originated in a vesicular rash (*eczema*) and have become dry, or in a squamous rash and have become inflamed. Such cases as these would be called by different authorities *eczema squamosum*, *psoriasis diffusa*, and *lepra eczematodes*. The history of the case during its early stages and an examination of all the affected parts will generally enable the student to come to a correct conclusion in reference to it. The disease left to itself either goes on to retrograde metamorphosis or it persists in statu quo, or from time to time undergoes exacerbations. As the disease subsides the epidermic scales fall off, and leave roundish red spots not much elevated. These gradually lose their color, become pale, and at length leave the skin without scar, discoloration, or other change. The surface upon which the scabs rest is not always of a bright red color, but sometimes dull, of a brownish or a coppery tint, even where there is no syphilitic taint; this is most frequently seen in anæmic subjects or during the decline of the disease.

The affected parts are liable to troublesome itching, especially at the commencement of the disease, or where it is

advancing. From scratching, the white glistening scales may be changed into black prominent crusts, which are most commonly seen at the margins of the patches. Psoriasis frequently invades the greater part of the surface, but cases are often met with where, either at first or throughout its course, it remains limited to one region. The situations which are most frequently thus attacked are the elbows and knees, and in cases of general psoriasis it is on these parts that the disease is commonly most persistent. The hairy scalp and the adjoining part of the forehead is another not unfrequent site for localized psoriasis. The hair is not usually loosened. All parts of the body, the face, and the limbs are liable to be invaded by this disease. When it is found exclusively on the palms or the soles, it is generally due to syphilis. The nails often suffer; they become thicker, opaque, uneven, and of a darker color—yellow or brown. They become very brittle, so that they do not reach the end of the fingers or toes, but break at the end and split up.

Sometimes, whilst the nail is still transparent, a spot of psoriasis can be seen on the matrix of the nail, similar to what is met with on other parts of the body. The hair does not commonly suffer. The mucous membranes are not involved. The so-called *psoriasis labialis* is more properly an eczema.

Psoriasis is usually met with in persons otherwise quite healthy, but is occasionally coincident with gastric derangement in young people, and in old persons there is sometimes a loss of appetite and flesh, whilst the skin gets dry and shrivelled. Such cases have been described by some authors, I believe, as *ichthyosis senilis*. When psoriasis diffusa is very aggravated, the scales unusually thick, and the patches very stiff, it has been called *psoriasis inveterata*. Cracks sometimes occur, from which blood and serum ooze, and

which are sometimes very painful. This is especially the case on the hands.

*Lepra alphoides* of Willan is merely psoriasis guttata, or orbicularis, with unusually white scales. *Lepra nigricans* is a name for a rare form of the disease, in which the affected parts have a dark livid color; the scales are thin, and have a dull grayish hue. It is met with in cachectic subjects.

*Course.*—Psoriasis is an eminently chronic disease, and is extremely liable to relapse. A person who has once been affected with it is most likely to have it again.

*Etiology.*—It is often an hereditary disease. I have several parents and children as patients suffering from this affection now under treatment. It does not usually affect all the children of a family, and occasionally, like other hereditary diseases, misses one generation. It attacks those of sanguino-bilious temperament in preference to others. The most common ages for it to make its appearance are between 12 and 30 years. Of sixty-seven cases under my care, in which the date of commencement has been noted, five began under 5 years of age; five between 5 and 10 years; ten between 10 and 15; twenty-four between 15 and 25; twelve between 25 and 35; five between 35 and 45; and six between 45 and 65 years of age. So that more than half began between the ages of 15 and 35, and 68 per cent. between the ages of 10 and 35 years. It is usually stated that psoriasis is caused by a great variety of conditions, but there is little evidence of the truth of these statements. It would rather appear that it may occur under very varying conditions, and that the cause is not known. Amongst the causes which have been assigned are damp atmosphere, the seasons of spring and autumn, certain articles of diet, drinking cold water when heated, catching cold, certain diathetic states, as chlorosis, arthritis, a "dartrous" diathesis, rickets, or tuberculosis, pregnancy, irregularities of menstruation, cessation of a hæmor-

rhoidal flux, mental emotions, want of cleanliness, certain occupations, such as shoemaking, washing, baking, &c. Hebra has very carefully examined this question, and comes to the conclusion that none of these conditions act as causes. Of 1000 cases the great majority were well-nourished, muscular, and good-looking persons. One only was rickety, and had suffered previously from hæmoptysis. This was the only case treated by Hebra in which he could say that cure took place, and no relapse had occurred in 15 years.

A great number of the patients were artisans, and many engaged in dirty occupations in which habits of cleanliness are not easily formed; but so far from dirt appearing to favor its occurrence, an undue number of cases was furnished by persons following occupations in which a frequent washing is necessarily observed—such as butchers, bakers, waiters, and the like. Patients with psoriasis not very unfrequently say that they feel better in health when the rash is out on them than when they are free from eruption. A certain amount of health appears to be essential to the existence of psoriasis, so that it is possible to cure a case of psoriasis by very much lowering the health of the patient by bleeding, low diet, and other such methods.

Irritant substances applied to the skin do not produce psoriasis, as they often do lichen and eczema. It appears that psoriasis occurs in all climates, at all seasons, and amongst all races of mankind. It is not usual before this disease to find either diarrhoea, constipation, or any retention of the elements of the urine or the sweat. In some cases it would seem that excess in eating or drinking, fatigue, or anger have been severally exciting causes.

Anatomically, psoriasis is hyperæmia and exudation into the upper layers of the cutis, with an increased production of epidermic cells.

*Diagnosis.*—*Eczema* in its later stages often somewhat re-

sembles psoriasis. This is especially the case on the scalp. In eczema there is always, at some period, a serous exudation, which on the head tends to glue the hair together; the scales of eczema are not so thick, white, and adherent as those of psoriasis. In *pityriasis* the scales are more branny, and not adherent to each other so as to form layers, and the subjacent skin is not in any way thickened. From pityriasis rubra the diagnosis is not always easy. See page 108.

The *squamous syphilides* differ from psoriasis in being covered with thinner, less laminated scales, not very white, and usually accompanied with a papular rash. It shows, in some cases, a tendency to ulceration. The history and concomitant symptoms, such as sore throat, enlarged posterior cervical glands, headache in the temporal regions, will generally remove doubt. The parts attacked are not the same; the hands and feet, and the neighborhood of the mouth, are common seats of the syphilide, whilst there is no special tendency to attack the knees and elbows. The tint of the syphilide is inclined to be coppery, but this is a sign of little diagnostic value. When the patches are very circular, and heal from the centre, it is often syphilitic.

*Erythematous lupus* sometimes appears to a novice like a patch of psoriasis. The color is not the same; the scales are very thin, and some of them often dip down into sebaceous follicles; it runs a very slow course, is almost limited to the face, and leaves a glazed, slightly scarred appearance.

Some stages of *Favus* look a little like psoriasis, but a close examination of its mode of growth, and the state of the hairs, will prevent any mistake.

The disease described by Hebra as *Lichen ruber* presents at some stages many points of resemblance to this disease. (See the description of that disease for further particulars.) It is essentially a papular, and not a squamous disease.

*Treatment.*—Some dermatologists trust entirely to internal

measures, whilst others attach greater weight to external applications. A combination of internal and external measures will be found most useful. There is no reason for considering the use of eliminants necessary, such as purgatives, diuretics, diaphoretics, with the view of removing from the blood some noxious ingredient. There are cases of this disease accompanied with gastric irritation, in which it is a manifest indication to cure that condition; this should be done by carefully regulating the diet, by the use of simple laxatives, such as the compound rhubarb pill, confection of senna or castor oil, and the administration of citrate of potash with dilute hydrocyanic acid; or if there be any tendency to pyrosis, bismuth should be given. Arsenic is, however, the remedy which will generally be found most serviceable in this, as in a number of other chronic skin affections. It is a drug which has been found by experience to promote smoothness and glistening of the skin of horses, and it is also useful in the human subject in improving the nutrition of that part. Its mode of action is not understood. The liquor arsenicalis may be given to an adult in a dose of five or six minims three times a day after food; the dose may be increased to ten or twelve minims until some itching of the eyelids is felt, or some tenderness at the epigastrium. The liquor arsenici chloridi (P. L.) is about half the strength of the liquor potassæ arsenitis, and has no special advantages, though preferred by some, and said to be less irritating. A new salt of arsenic has been lately recommended, the arseniate of soda, and is said to be less irritating, and very useful in cases where patients are unusually sensitive to the action of small doses of arsenic. The liq. sodæ arseniatis (P. B.) contains half as much metallic arsenic as the liquor arsenicalis. Children bear arsenic well, and require proportionally larger doses of it than adults. This medicine usually exerts a beneficial influence on the course of the disease, and will

commonly cause its entire disappearance, but does not prevent relapses. It seldom has any injurious effect on the general health, but acts rather as a tonic than in any other obvious way, and it sometimes corrects irregularity in the menstrual functions.

When a full medicinal dose of arsenic has been given, there will be a slight increase of heat and dryness in the skin, and the pulse a little quickened; there is also heat and itching of the eyelids, with very slight swelling. The tongue sometimes is coated with a thin silvery film. If the doses be continued, the throat becomes dry and sore; and Dr. Begbie states that the gums swell and become tender, and that salivation is sometimes induced. Nausea, vomiting, and diarrhoea succeed, with nervous tremors and fainting. Occasionally a minute papular rash, which soon desquamates, is seen, especially on the chest and abdomen of persons with fair complexion. When any of these symptoms occur, the dose should be slightly reduced. The treatment should be continued for months after the rash has disappeared.

Tincture of cantharides has been recommended as a substitute for arsenic, and is spoken highly of by some. The dose should be two or three minims, gradually increased to ten or twelve, three times a day. It is a remedy which requires to be carefully watched, from the risk of its causing strangury and hæmaturia; I have had so little occasion to be dissatisfied with arsenic that I have not given cantharides a good trial. Biett, H. Bennett, and others have recommended the combination of arsenic and cantharides. M. Hardy recommends the use of copaiba in doses of from twenty to thirty grains three times a day, with an equal quantity of magnesia and some opium.

Locally, the remedy which has found most favor is tar, which may be either used alone, or in the form of an ointment with equal parts of lard. Hebra advises its employ-



ment in the form of a soap, or equal parts of soft-soap, spirit, and tar may be used. The objection to tar is its color and smell; the empyreumatic oils from other trees are less disagreeable, and are equally efficacious; the tar of the *betula alba* is said to be the most pleasant; the "huile de cade," so much used in France, is prepared from the *juniperus oxycedrus*. It is of no use to apply ointment over the thick scales of psoriasis; the best plan is to remove these scales by a water dressing, and then apply the remedies, which should be rubbed firmly into the reddened derma.

If the color of tar be objected to, an ointment containing from ten to fifteen drops of pure creasote in an ounce of lard; a weak mercurial ointment, with or without a little purified creasote, will be found serviceable. Alkaline and vapor baths are useful in severe cases. If a patient be very plethoric, and the pulse full, bounding, and frequent, and the affected parts be very hot, red, and itching, it will be well to commence the treatment by giving a saline with antimony. In some cases this has a very marked effect. (William Mills, pp. 31 and 24, U. C. H., Vol. I.) This patient once recovered under the use of arsenic; the disease recurred, and was aggravated by the administration of arsenic; he rapidly recovered under the use of antimony. He was a strong man, with full bounding pulse. In obstinate cases the mineral sulphur waters, such as those of Harrogate, Baréges, or Aix-la-Chapelle, have been found beneficial. The diet in psoriasis should not be too rich, not too azotized; salt meats, pork, spiced dishes, shell-fish, strong coffee, and alcoholic drinks are to be forbidden.

Helen states that he has seen the hydropathic system of medical treatment in some severe cases of psoriasis. He recommends being carried out in the following manner:—The bed must be thus arranged: on the mattress must be placed a layer of impermeable material (such as mackintosh or gutta

percha); above this two strong well-folded towels, then a thick woolly doubled blanket, long enough to cover the head and feet; on this blanket is spread a linen sheet, previously soaked in cold water, and well wrung out, and upon this is laid the patient quite stripped, a small urinary vessel being supplied between his legs. The patient is then completely wrapped up, the wet sheet being laid upon his scalp, forehead, ears, and cheeks, whilst the sides of the sheet are tucked over his trunk and limbs. In the same manner the blanket is laid over the sheet, and only the nose, mouth, and eyes of the patient left free. Then the cross towels are bound together, so that the sheet and the blanket are firmly pressed to the patient's body. Water is given to him freely to drink, in order to promote perspiration, and he is left in this position for three or four hours. The next part of the process is the use of a cold bath. To admit of his walking to the bath the lower girdle is loosened, and the wet sheet and blanket set free from the legs; on arriving at the cold bath the coverings are quickly removed from the upper part of his body, and the patient plunges into cold water. Whilst in the bath the patient is rubbed with towels, and directed to move himself about in the water. When it can be managed, at the conclusion of the cold bath a cold douche is applied to the whole surface; or in other cases water is wrung out of a large sponge, or poured out of a can on to the patient. He is then wrapped in dry towels and rubbed dry, and after dressing quickly goes for a walk in the open air. This process is repeated twice in the twenty-four hours, in the early morning, and at four in the afternoon. At the same time the patient is kept on a nutritious simple diet; alcoholic stimulants are withheld, and a large quantity of water is ordered to be drunk.

It is important to bear in mind in ordering tarry preparations that there are some persons who are specially suscep-

tible, in whom a single application of tar will cause swelling and redness of the skin, a sensation of stretching, or even the formation of erysipelatous blebs, which do not immediately subside even on the suspension of the tar. In other cases the treatment is borne very well for a time, when suddenly a change occurs, and every new application causes considerable inflammation. The long-continued use of tar often gives rise to inflammation and swelling of the hair follicles, which are seen as papules of the size of hempseed, or larger, like acne, with a black spot in the centre of each. Hebra calls it *tar acne*.

When tar is rubbed freely into the skin of the whole body, Hebra states that occasionally vomiting of a black-colored fluid occurs, or black stools, or more frequently olive-green or black transparent urine is passed, which has a strong tarry smell which is much increased by the addition of a few drops of sulphuric acid.

This entry of tar into the circulation is accompanied with constitutional symptoms, such as shivering, nausea, vomiting; they do not last long and generally cease with a copious diuresis.

### PITYRIASIS.

(Neligan's Atlas, Pl. XI., Fig. 3.)

*Pityriasis*—a name derived from the Greek word *πυρρην*, bran—is given to several morbid conditions of skin which are characterized in common by the production and separation of numerous fine white scales. This name should be given only to cases in which throughout their entire progress there is no exudation into the derma, and no albuminous secretion on the surface. *Pityriasis rubra* is a name given by many writers to a condition which is really a later eczema; many of the so-called cases of *pityriasis capitis* are also cases of eczema; at the commencement they are accom-

panied with a serous glutinous secretion, and are liable at any time to return to that secreting condition. The term pityriasis has also been wrongly applied to a congenital defect of the skin (xeroderma), to which reference will presently be made; in this affection there is a roughness of the skin, but the scales are not constantly being shed.

Desquamation is a symptom commonly met with after scarlatina and measles, and a condition of skin is thus sometimes produced in all respects resembling pityriasis.

The common morbid state known as pityriasis capitis or dandruff has been shown by Hebra to be often due to an excessive secretion from the sebaceous glands, and has been called by him *seborrhœa capillitii*. This occurs either in children, or in adults. It is very frequently met with in children, beginning at about the age of a month. Whitish scales appear on the front of the head, which may be washed off with soap, and thus kept in check. If the greasy scales are not washed off, they soon assume a dark dirty color, and in this way the whole scalp may be covered with a thick, dirty brown layer of scales as much as a line in thickness. If portions of this layer are removed with the finger nail the scalp is usually found of the normal color, sometimes a little reddened, but there is never any thickening of the scalp or moist exudation. The smell is a little like that of sour butter. This is the state of things not met with amongst persons of cleanly habits, but in some places there is a strong prejudice against washing children's heads. It is a condition which will get well spontaneously at about the age of two years, from the increased growth of hair and diminution of sebaceous secretion. In adults the same condition is frequently met with, to a less degree. There is a little itching and feeling of warmth in the part affected, but there is no increase of temperature to be detected by an observer. Very fine whitish or whitish yellow scales are

## RESPIRATORY SYSTEM

The respiratory system is that part of the body which is concerned with the intake of oxygen and the removal of carbon dioxide. It consists of the trachea, bronchi, bronchioles, and lungs. The trachea is the windpipe, which is a tube that leads from the larynx to the bronchi. The bronchi are the main airways that branch off from the trachea. The bronchioles are the smaller airways that branch off from the bronchi. The lungs are the organs in which the exchange of gases takes place.

The respiratory system is a complex system that is essential for life. It is responsible for bringing oxygen into the body and removing carbon dioxide. The trachea and bronchi are lined with a mucous membrane that helps to trap dust and other particles. The lungs are covered by a thin layer of fluid that allows them to expand and contract. The diaphragm is a muscle that contracts and relaxes to help with breathing.

The respiratory system is also involved in the regulation of blood pH. When the blood becomes too acidic, the respiratory system increases the rate of breathing to remove more carbon dioxide. When the blood becomes too alkaline, the respiratory system decreases the rate of breathing to retain more carbon dioxide. This helps to maintain the blood pH within a normal range.

There is a form of pneumonia that is caused by a parasite whose specific function is to destroy lung tissue. It has received the name of *paragonimiasis*. It is frequently seen in phthisis and cancer. It is produced by a premature decay and

detachment of the epidermic cells, so that the cuticle is thinner than normal, and its surface rougher.

*Pityriasis pilaris* has been described under the head of Lichen, page 69.

*Pityriasis versicolor* will be described in the chapter on Parasitic Diseases.

*Etiology.*—The causes are not well understood. It is sometimes hereditary. Children from 5 to 12 years of age are very subject to a mild form of the disease. Amongst adults it is more common amongst women than men.

*Diagnosis.*—From *psoriasis* it is distinguished by the absence of thickening of the derma, by the scales being much finer and separating more easily. It does not attack the knees and elbows, as *psoriasis* so commonly does.

From *eczema* it can be distinguished with the greatest ease, unless the case comes under notice for the first time during the desquamative stage of this disease. The appearances then presented are so similar, that in order to decide what is the true nature of the case, it is often necessary to ascertain whether at any period of the disease there has been moisture exuded of a glutinous nature, tending, when occurring on the scalp, to mat the hair together.

From *herpes circinatus* of the furfuraceous variety, or ring-worm of the body, the distinction is not always easy. If the patch is not round, is not extending at the circumference, and there is no sound skin in the middle, and no trace of vesicles, the case should be called pityriasis. In *herpes circinatus* there can usually be found, when the scales are examined microscopically after the addition of dilute liquor ammoniæ, a vegetable parasite, the trichophyton tonsurans.

*Prognosis.*—Pityriasis simplex is not a serious disease, except from its chronic character. When occurring on the head, it may lead to premature loss of hair, which is much

deplored, even by gentlemen, and still more so by ladies. The hair is not permanently lost if the pityriasis is cured.

*Treatment.*—The treatment is both local and general. In pityriasis capitis local means will often be sufficient. A weak alkaline lotion, such as sixty grains of subcarbonate of potash to ten or twelve ounces of rose water, or two drachms of liquor potassæ to eight ounces of rose water, or the same quantity of liquor ammoniæ may be used in the same way with rosemary water. If the scales are thick, it is well to use an ointment composed of fifteen grains of the red oxid of mercury, with half an ounce of lard and half an ounce of olive oil, or thirty grains of white precipitate instead of the oxide. Hardy recommends strongly an ointment containing one part of sulphur to thirty of lard. Internally, if there be gastric derangement, this should be treated. If not, arsenical preparations will be found very beneficial. Diet should be simple—nutritious, but not too stimulating and heating.

*Pityriasis rubra*, if the cases of eczema which resemble it be excluded, is a rare disease described by Hebra, who has only seen three cases of it. He confines the name to a morbid state of skin, in which, during its entire course, there is no other appearance than a dark-red, persistent color, without much infiltration, without development of papules or vesicles, without cracks or oozing, accompanied by but very slight itching, and hence not leading to excoriation. It is not commonly limited to single spots, but has a tendency to involve almost simultaneously the whole surface. The skin, at first slightly reddened, becomes more intensely so, and that of the lower limbs has a more bluish tint than other parts. The color, as might be expected, is modified by temperature, being of a brighter red when warm than when exposed to cold air. The skin is a little stiffer, and less freely movable on the subcutaneous tissue than in health. Beyond the color, and a greater or less collection of effete epidermic

cells heaped together, no symptoms are noticed till towards the end of life, which this form of disease appears to hasten. At this time the skin gradually pales, at first being yellow, then fawn color which disappears after death. Many years often elapse before this termination ensues, during which the patient very gradually loses flesh and strength, and dies in a state of marasmus.

*Diagnosis.*—This disease may be diagnosed from *psoriasis* by the absence of thickening in the cutis; by its attacking the entire surface from head to foot; by the constant copious detachments of thin scales in smaller or larger flakes. From *eczema* it is distinguished by the absence of albuminous sticky secretion; by the slight amount of heat or itching, and the absence of infiltration of the cutis vera. From *pemphigus foliaceus* by the entire absence of blebs through the whole course of the disease. The abundant desquamation and its universality will distinguish it from erythema and from erythematous lupus.

The treatment proposed by Hebra is the same as that given for psoriasis. In his cases, however, no good results have been observed to follow. Lukewarm baths, long continued, and the inunction of oil are said to have a beneficial effect.

Devergie uses the term pityriasis rubra to describe cases such as those mentioned by Hebra, but he seems not clearly to distinguish between such cases and some forms of eczema and pemphigus. He does not regard the disease as of such a grave character as does Hebra, unless it occurs in old, weak persons, or becomes complicated with pemphigus. He states that it seldom shows itself till near the age of 40 years, yet two cases he quotes were aged sixteen and twenty five years respectively! It is, he says, the only affection which attacks the entire surface of the body without leaving a sound spot from the crown of the head to the soles of the feet. Two



cases have come under my care which, in many respects, correspond to the descriptions of pityriasis rubra. Both of them improved under the use of mercurial treatment. In one case there was a probability of syphilis; in the other case there was a great improbability of this disease having existed. It was noteworthy in this case that re-vaccination preceded the first appearance of the rash by one month only; there was no reason to suppose that syphilis was inoculated by that operation, especially seeing that the inoculated part healed up within the usual time.

E. P., æt. 13, an orphan girl, with dark hair and dark eyes. The causes of her father and mother's deaths not known. She is the second of four children; the eldest is living, aged 20 years. Two younger ones died in infancy.

Her general health has been good. Was vaccinated as an infant, and was not subject to any cutaneous eruption until July, 1863.

Has been three years at an orphan asylum. In June, 1863, was re-vaccinated on the left arm; the sore healed up readily. About a month after this an eruption appeared on the other arm, and soon afterwards on the left forearm and the two legs. The patient states that the eruption was exactly such as she had had this year. She says they began as pimples with a white scale on them; some of them grew to the size of a half-crown piece. There was no moisture on them. They itched and burned. They disappeared without treatment before the end of the summer. In June, 1864, the rash again broke out on her arms.

On 11th August she was admitted as a patient at University College Hospital, when the following notes were taken by Mr. Bartlett, the physician's assistant: "The whole of anterior aspect of arms is covered with a scaly eruption, in some parts scattered, in others large patches of the size of a crown

piece are formed. The scales about half a line thick at their thickest, and of a yellow color. They seem perfectly dry. The eruption is most continuous and the scales thickest on the outer aspect of the arms; flexion and extension of these limbs is rendered difficult. On the backs of the hands the eruption is more scattered, varying in size from a pin's head to a sixpenny piece. There are a few similar spots on the bridge of the nose, and a few outside nipples. Where the scales have fallen off the skin is red, and has a glistening look. On upper and outer parts of thighs the same eruption exists, but scales not so yellow. Patient is pale and anæmic. Tongue red at the tip. Appetite good, no dyspepsia. Bowels regular.

Urine, acid, free from albumen.

She took cod-liver oil for three days.

On 15th August eruption was increasing on face. She was ordered eight minims of Donovan's solution three times a day; and to use

Unguent. zinci oxidi to left arm;

Unguent. picis to right;

Unguent. hydrarg. nitr. oxid. mitius to right leg;

Unguent. simplex to left leg; and

Olive oil to body.

On 19th it was noted that her whole body presented the character of a hybrid between psoriasis and eczema.

The zinc ointment appears to agree best, and is now to be used generally.

22d. No better. To omit cod-liver oil and Donovan's solution, and take citrate of potash mixture.

Sept. 8th. Rather worse.

R. Liquor. pot. arsen.  $\mathfrak{m}\text{iv}$ .

Aquæ  $\mathfrak{z}\text{ss}$ .

M. Ter die sumend.

On 17th, all treatment stopped except the ointments."

On September 21st she came under my care. The whole surface is affected more or less. It is in most parts covered with large thin flakes, which rub off very readily without pain or bleeding; the skin beneath is not thickened; in some places it is reddened, in others it is of the natural tint. In the redder portion it is found that there is visible, by means of a pocket lens, very notable *punctiform injection*, which disappears on pressure. Temperature of axilla 99° Fahr. Skin feels dry. Hair on head thick, not coming off. Nails irregular and opaque at *funula*, thickened and flaky on the inner aspect of the free portion. Pulse only fifty-two in the minute, regular, moderately firm.

*Description of eruption.* Face dry, covered with white small scales. Eyelashes long, a little clogged with dry secretion. At the corners of *alæ nasi*, upper lip, and on chin, is a yellow, honey-like secretion. The *pinnæ* are also thickened and coated with a sort of eczematous discharge. The scalp is covered with thick, dry scales. Arms universally affected; on the outer aspect some patches of a dull pink color, which gradually merges into the normal, whilst other patches are brightly red. The changes of tint are nowhere abruptly defined, but imperceptibly run into each other. The palms of the hands are dry, with some branny scales, but no cracks. A little clear moisture in *axillæ*, and a sort of eczematous oozing at the bend of the arms. The trunk is universally affected, the back covered with innumerable thin scales like dry hop leaves, which fall off almost in handfuls on removing the dress; the subjacent skin in places looks natural, in others too red. The lower limbs also affected in the same way.

The color of the skin is found to depend entirely on number of fine red points the size of pins' points, which in the redder portions are very distinct and very numerous. I cannot determine whether these points are at the orifices of sweat glands or hair follicles, or independent of both.

23d. Warm baths and the inunction of olive oil have aggravated the symptoms. There is more redness of the skin, and a more copious desquamation; there are at least two handfuls of scales in the bed every morning. At parts there is a little moisture, which is alkaline, it does *not stiffen the linen*. She does not complain of tingling or itching. There is some uneasiness of arms and legs felt on flexion. She was now ordered,

R Hydrarg. bichloridi gr.  $\frac{1}{16}$ ; .  
Potassii iodidi gr. 1. In water, three times a day.  
Simple lard to be applied all over the skin.

Five days later the skin was much better, paler, and desquamating less freely. A small phlyctenula forming on right eye, with free lachrymation;—to be bathed with warm water.

On 4th October eye was well. Skin rapidly improving. Patient feels much stronger and in better spirits. Pulse now sixty.

Oct. 18th. Skin now free from scales, becoming quite healthy. The only part now affected is the scalp, where there is a thick crusting of scales and sebaceous matter. There has been a great thinning of the hair. She seems perfectly well. Pulse sixty-eight, of good force. Is gaining flesh.

Nov. 18th. Is now quite well. Hair growing again.

*Remarks on the Case.*

At the commencement the appearances closely resembled psoriasis; subsequently there seemed to be in places a close resemblance to eczema, especially on the external ears and above the chin. It differed, however, from psoriasis in several respects. (1.) Its universal distribution. (2.) The readiness with which the scales were detached. (3.) The ab-



## ICHTHYOSIS.

(Neligan's Atlas, Pl. XI., Fig. 4.)

This name has been given to that morbid condition of skin which is characterized by the formation of particles of epidermis either white and thin, or dark-colored, green, brown, or even black, and rough to the touch, particles which adhere firmly to the subjacent derma, and are marked by lines and deep furrows similar to, but much deeper than, those which exist on the sound skin. The lines and furrows subdivide the surface either into quadrangular, roundish or quite irregular-shaped segments. The slightest degree of this abnormal state has merely the appearance of ordinary pityriasis; on close examination the small quadrangular spaces of the skin are seen to be covered with particles of cuticle adherent at the centre and loose at the sides. This has been called *ichthyosis simplex* or *xerodoma*. A more advanced stage of the disease exhibits the epidermis heaped up in a much greater quantity, and altered in form as well as in chemical composition; it acquires by an accumulation of pigment a darker color, and comes to resemble a serpent or other reptile, or the bark of a tree. In rarer cases the epidermis is arranged in the form of spiculæ, so as to resemble the integument of a porcupine. In the aggravated cases the terms *ichthyosis cornea* or *I. hystrix* have been employed. The spines may vary in length from one-eighth to one-quarter of an inch or more. In some cases the epidermic masses are shed periodically, and again speedily accumulate.

This disease is often congenital or manifests itself shortly after birth, not attaining its greatest development till towards the age of puberty. It is either general or local; when general it avoids the palms of the hands, soles of the feet, the axillæ, the popliteal spaces and flexures of the arms. When

local it affects especially the legs and forearms near the elbows.

Patients thus affected are said not to be very robust, not to recover well from exanthemata, to suffer from cold, and to be subject to diarrhoea and shortness of breath. On this point, however, opposite statements are also made by other authorities, and in my own experience no cases have occurred confirming this statement.

Ichthyosis is often hereditary. At the beginning of the present century two brothers, John and Richard Lambert, suffered from this disease to such a degree as to become notorious. They went about in France and other parts of Europe exhibiting themselves for money under the name of Porcupine men. Their entire bodies were covered with scales having a horny appearance and consistence. The only parts not so affected were the face, the palms of the hands, the soles of the feet, and the interspaces and bulbs of the fingers. Their father is said to have been subject to the same condition of skin, whilst they had seven sisters who were entirely free from it. It is said that they were born free from the disease, but that it began to make its appearance about six weeks after birth.

A case is recorded in which ichthyosis affected a man, did not affect any of his children (three sons and three daughters), but affected four out of five grandsons and spared his only two granddaughters; the seven grandchildren being the offspring of two of his daughters.<sup>1</sup>

The disease consists essentially of an hypertrophied and altered condition of the epidermis with or without hypertrophy of the papillæ. The chemical constitution of the epidermic cells is altered; there has been formed an excess of the inorganic ingredients generally, with an excess of fat,

<sup>1</sup> Sedgwick, Brit. and For. Med. Rev., Vol. XXVII. 1861, p. 478.

and a decided trace of iron with phosphate and carbonate of lime and in some cases silica. In severer cases the hair follicles are occluded and disappear, as well as the sebaceous glands; there is sometimes hypertrophy of the papillæ of the skin; and when the disease appears late in life there has been found general hypertrophy of the cutis vera.<sup>1</sup>

*Treatment.*—This can only be palliative. No cure is known. Warm alkaline baths or vapor baths with strong alkaline soaps remove the scales to some extent; and oil or glycerine rubbed into the skin afterwards will tend to make it more supple.

The scales, however, are soon formed again.

Arsenic has not been found to be of much service.

Hardened sebaceous secretion, forming squamous layers, or rough almost horny prominences, are occasionally met with, and have been described by different writers under different names. Bateman's 18th plate, in his "Delineations of Cutaneous Diseases," which depicts what he calls ichthyosis faciei, seems to represent a case of this character. It is called by Professor Hebra seborrhœa sicca, and by Professor Hardy acné sébacée concrète, and acné sébacée cornée. These cases have led to confusion, and seem to have induced Mr. Erasmus Wilson to call even true ichthyosis cornea by the name of ichthyosis sebacea squamosa and ichthyosis sebacea spinosa, names only suitable for cases of spurious ichthyosis.

The true nature of the cases which really depend on altered sebaceous secretion can readily be ascertained by removing the scales or horny concretions, when the enlarged orifices of the sebaceous glands will be readily seen. This form of skin affection will speedily yield to warm baths and alkaline lotions. An interesting account of two cases of ichthyosis

<sup>1</sup> Gustav Simon, Die Hautkrankheiten, pp. 42-50. Berlin, 1851.



spura vel sebacea is given by Dr. J. W. Ogle in the 46th volume of the *Medico-Chirurgical Transactions*.

There is a condition which has been described under the name of *ichthyosis congenita*, which appears to be totally distinct from the disease just referred to. The whole surface of the body is covered with laminæ of cuticle, loosely adherent to the cutis, which is unaltered. The children thus born have died in a few days. Hebra proposes to give this affection the name of scutulation or incrustation, or *ichthyosis sebacea neonatorum*, because the cuticle in its superficial layers is much infiltrated with sebaceous matter.

## CHAPTER X.

### VESICULAR DISEASES.

MILIARIA, SUDAMINA, ECZEMA, HERPES, PEMPHIGUS, AND RUPIA.

THIS order included in Willan's classification varicella, vaccinia, herpes, rupia, miliaria, eczema, and aphtha. I shall describe under this head miliaria, sudamina, herpes, eczema, rupia, and pemphigus. Varicella and vaccinia are omitted, as belonging to the second class of diseases; and aphtha as being an affection of the mucous membrane, not of the skin; whilst rupia presents at the commencement either pustules or blebs, and might with equal advantage be arranged amongst pustulæ, from its close affinity to ecthyma. Pemphigus is described in this chapter, although its elementary lesion is a bleb rather than a vesicle; but I have brought together, as stated before, the bullæ and vesiculæ.

The simplest form of a vesicle is seen in *sudamina*. These are frequently met with in the course of continued and rheumatic fevers; they are common also at any time in rickety or tubercular children who perspire much. The vesicles are very small, quite transparent, so that they are often more easily felt than seen. They sometimes look exactly like drops of water. The skin around them is of the usual color: they occur in groups and appear quite suddenly. Individual vesicles last two or three days, then burst, or the fluid is absorbed and a small white scale is left, which soon becomes detached. The common seats of them are the front of the neck, the epigastrium, the abdomen and chest, and the bend of the thighs. The contents of the vesicles have

an acid reaction, and come from the sweat-glands. It is supposed that the ducts of these glands become occluded by dried secretion, then, when a free secretion occurs, the fluid secreted forces its way between the superficial layers of epidermis, and appears as a small limpid vesicle. Sudamina are seldom or never met with after middle age. It is of no importance as affecting prognosis. The only treatment required is to see that the patient is not covered too warmly, and that the linen is frequently changed.

*Miliaria* is allied to sudamina, and consists of an eruption of vesicles the size of millet seeds (hence the name from *milium*, a millet seed). The vesicles are not hemispherical, but accumulated, and surrounded by a narrow zone of redness; their contents become very speedily turbid. It is an eruption often met with in the course of rheumatic fever, and in young children who perspire much. It is sometimes seen in the course of pyæmia and puerperal fever. The redness around each vesicle is sometimes more apparent than the vesicle itself, and may then resemble in appearance roseola æstiva. In true roseola, miliary vesicles may be seen interspersed with the exanthem. There is an epidemic disease called miliary fever, characterized by profuse sweating, and a miliary eruption lasting eight or nine days, and sometimes proving fatal within two or three days. It was epidemic in England in 1821; it is doubtful whether the sweating sickness which raged in England in the sixteenth century was the same disease. Miliary eruption was much more common formerly, when warmth in every form was considered essential in the treatment of febrile states, than it is at the present day. It is an eruption produced like sudamina, but accompanied with local congestion or inflammation around the vesicles.

## ECZEMA.

(Neligan's Atlas, Plate III.)

This is one of the commonest skin diseases. Devergie states that it constitutes one-third of his cases. I have found it in the proportion of about 17 per cent., or less than one to five, in 150 out of 882 cases; this is nearly the proportion observed in the hospital, Blackfriars Bridge, during two months. The name is derived from *εξίω*, to boil out, in reference either to the burning sensation with which the rash is accompanied, or to the eruption itself. It was called by Alibert *herpes squamosus madidans*. By Willan and Bateman it was defined as "an eruption of minute vesicles, not contagious, crowded together; and which, from the absorption of the fluid they contain, form into thin flakes or crusts." There is at first an erythematous condition of skin, with heat and tingling; this is soon followed by the formation of vesicles more or less distinct; they are very small, usually confluent, and as a rule, with few exceptions, are very speedily ruptured, and an alkaline albuminous fluid escapes from them which is glutinous, and sometimes irritating to the surrounding skin. The contents of the vesicles and their walls dry up into thin flaky crusts, either white and opaque, or yellowish. The disease does not often come to an end with the drying up of one crop of vesicles, more commonly a rapid succession of them is formed, or the surface on which vesicles at first appeared remains very red and raw in appearance. A fluid resembling that contained in the vesicles oozes more or less abundantly in distinct drops from isolated points of this surface. After the disease has existed some time, there is more or less exudation into the derma, causing a decided thickening of that structure, which is recognized when a fold of the skin is pinched up and compared with a corresponding portion of sound skin treated in the same way.

The individual vesicles of eczema are of short duration, not lasting usually more than thirty-six hours; on the hands and feet, where the cuticle is thick, the vesicles often exist much longer, and sometimes disappear without rupture, by absorption of their contents, or several vesicles run into each other and form a bleb. In some cases no vesicles can be found; the skin is red and inflamed, and instead of vesicles, fissures make their appearance in the cuticle. These are either few or many; at first superficial, but becoming deeper as the disease is of longer standing. The fissures are red, and pour out serum or blood which forms yellowish or brownish crusts; they are often extremely painful. This form has been called "eczema fendillé" by the French; Drs. Buchana and Anderson, of Glasgow, propose to call it *eczema rimosum*. It is met with most commonly at the corners of the mouth, at the anus, and on the hands. When the crusts are removed from an ordinary case of eczema, whether spontaneously or by artificial means, there is seen, during the active period of the disease, a red surface dotted with small points, from which drops of clear serous fluid ooze forth. In more chronic periods of the affection, the surface is either dull red or brown and is sometimes covered with fine branny scales like those seen in pityriasis, and at other times with thick scales lying over each other like those of psoriasis. In chronic eczema it is very common to see on the thickened patches of skin papules, having all the characters of lichenous papules; in some of these there is a secretion of serum; this is then called lichenoid eczema, or lichen agrius. In some cases, instead of a clear fluid proceeding from the vesicles, their contents become turbid and purulent; the case then runs into one of impetigo, or, if there is a mixture of vesicles and pustules, the term eczema impetiginodes is employed. Some recent writers consider eczema, impetigo, lichen, and even prurigo, only one disease. Between the three former ther-

are no doubt close alliances, and there are forms of disease which act as intermediate links between them, but for purposes of description it is convenient to keep the several distinct names.

Parts affected with eczema burn, tingle, and itch; burning and tingling are most marked at the early periods of acute cases, whilst itching is most severe in chronic cases. It is at times most intense, and life is rendered an almost intolerable burden. This was illustrated by the following case.

*Case of Congenital Xeroderma.—Eczema constantly recurring, twice alternating with Rheumatic Fever.—Chronic Bronchitis.*

A. N., aged nineteen, a laborer on the railway, states that his health has usually been good, but he has been subject to a skin affection from infancy.

On admission to University College Hospital, the whole surface of his body was more or less rough. In many parts there was an oozing of tenacious clear secretion; in others this had dried into yellowish thin crusts, especially on the face. The scalp was covered with dry scales, and the hair slightly matted together. The only parts not affected were the flexures of his arms and legs, the palms of hands, soles of feet, and groins. The back was less affected than the front of trunk. The lymphatic glands in inguinal region below Poupart's ligament were much swollen; glands of neck also swollen. External ears were the seat of moist secretion. The burning and itching are most distressing, worse at night, so that he gets little sleep. The bed is filled with branny scales and yellow crusts. There is a peculiar cheesy smell from the patient's body. Pulse 108. Tongue clean. Much thirst. Urine abundant, normal. He usually has a cough; there are signs of emphysema and chronic bronchitis in the chest.

I treated him first with antimonial saline mixture, followed

by arsenic in the form of Fowler's solution, six minims three times a day.

After six weeks of this treatment his skin had much improved; his bronchitis was, however, worse, and he had considerable dyspnoea at night. He omitted the arsenic, and the skin became worse. He then resumed the arsenic, and in the course of a few weeks he began to complain of pains in back and loins, which were soon followed by an attack of rheumatic fever. A little blood was drawn and tested for uric acid on Dr. Garrod's plan with the thread, and found to be free from it. During the rheumatic fever he had an attack of pericarditis, but his skin was much better. His rheumatism hung about him for several weeks, but the skin continued better. He now told me that, whilst under treatment at St. George's Hospital for his skin several years before, he had a sharp attack of rheumatic fever, that his skin got well at the time, and continued so for several months. On questioning him closely, it would appear that he has had from his birth a minor degree of ichthyosis, and has had constant recurrences of eczema. The relation between his rheumatism and the skin disease is interesting. Nine months later he presented himself again at the hospital with a return of eczema, the skin in the interval having been free from discharge, but always harsh and dry.

As an indication of the amount of irritation accompanying the disease, I may mention that, on recovering from rheumatism, his skin being better, the patient called my attention to the circumstance that his nails were growing beyond the ends of his fingers, a condition which was quite unusual with him, as he habitually wore them down low, by incessant scratching. While his eczema was at its worst, his urine was carefully saved for six days, and tested quantitatively for urea, and on two days for uric acid. The mean amount of urine passed in twenty-four hours was forty-two fluid-ounces, con-

taining on an average 502 grains of urea. This seemed to indicate that he was passing rather a concentrated urine, but that the urea was not in excess. Dr. Parkes gives as the average quantity of urine passed by a healthy adult 52 fluid-ounces, and of urea 512 grains. Of uric acid there was found on two days an average of 3.5 grains only, which is considerably below the average.

*Case of General Eczema of thirty years' duration.*

*Chronic Bronchitis, twenty years.*

M. N., an Irishman, aged fifty-two years, by trade a nail-smith. He states that he has been subject to a rash upwards of thirty years; that it began on his hands and arms, and extended to his body. He has been a patient at several metropolitan hospitals, and has received temporary relief. He volunteers the statement *that when his skin is better his breath is always shorter and his cough more troublesome.* Has had a cough more or less constantly for twenty years. When admitted to the hospital the whole surface of his body was covered with scales, vesicles, or moist glutinous discharge. The palms of hands and soles of feet were free. The itching and burning were intolerable, so that he was incessantly scratching himself furiously. Tongue disposed to be dry. Thirsty; appetite good. Bowels regular. The smell from his body is like rotten cheese.

R I ordered Liq. arsenicalis ℥v.

Potassæ sulphatis gr. x.

Aquæ menth. pip. ʒj, misce. Ter die.

To use benzoated zinc ointment locally.

I also ordered hot air baths on three consecutive nights, which caused him to perspire profusely.

His urine was observed to deposit lithates and lithic acid very abundantly, and also some crystals of oxalate of lime.



On this treatment he improved rapidly, and left the hospital about six weeks. He returned six weeks afterwards with an exacerbation of bronchitis, skin remaining better, but not cured.

### *Remarks on the Cases.*

These two cases may be taken as illustrating some of the features of the acute general eczema; in both cases there was also a tendency to chronicity, and in one a rheumatic tendency. If the acute general eczema the skin was generally better. Chronic eczema is a common accompaniment of chronic eczema; but the treatment used to cure the eczema does not aggravate the chronicity, but if from any cause there is deterioration of the blood or the bronchi the skin for a time is less benefited, and probably less freely supplied with blood. In the chronic cases an alternation between eczema and bronchitis is not uncommon, although eczema is not uncommon in the absence of bronchitis.

When the eruption is high there is often subcutaneous oedema, which is due to exudations in the derma and epidermis and to the accumulation of fluid in the interstices. As the improvement of acute eczema is attended with less severe febrile symptoms, such as high temperature and delirium; there is nothing distinctive in the eruptions by which they can be distinguished from the eruption begins to show itself. The subcutaneous oedema is often and frequently liable to attacks of inflammation. In other cases the patients are subject to dyspepsia, vomiting and diarrhoea. Leucorrhœa is a common accompaniment of the subjects of eczema. Eczema is often attended with acute course and does not return, but much more commonly it is a chronic affection, and it is very liable to recur in this respect resembling psoriasis. It frequently occurs symmetrically on the two sides of the body. Parts which have been affected with eczema may

continue red for some time, then become violet, and subsequently resume the natural color of the skin. There is no scar left by eczema, but a brown stain may remain for a long period. The skin may continue to be rough and thickened for some time after other signs of eczema have disappeared.

*Diagnosis.*—The distinctive mark of eczema is the clear albuminous exudation which stiffens and stains the linen. *Erythema intertrigo* resulting from the friction of opposing surfaces is sometimes attended with a moist secretion, but this is not abundant, is less plastic, and does not stiffen linen. *Eczema of the hands* may resemble *pemphigus*; but, although there are blebs in this form of eczema, numerous vesicles will usually be seen at the same time, and if the formation of the blebs be watched they will be found to arise from the confluence of vesicles. Eczema of the hands attended with blebs runs an acute course, whilst pemphigus is chronic and is characterized by a succession of bullæ. An examination of the rest of the body will reveal the true nature of the case.

*Pemphigus foliaceus* may resemble eczema; but it is attended with bullæ; the skin is not infiltrated, and the scales much larger. It tends to spread over the entire body. In eczema there are no blebs except on the hands; the skin is usually thickened by infiltration; the scales and crusts are not so large. It seldom if ever attacks the entire surface of the body at once.

*Lichen* is primarily papular; *eczema* is primarily vesicular. *Lichen agrius* cannot always be distinguished from eczema lichenoides; nor is there any advantage to be gained from making the distinction, inasmuch as the treatment for both is the same. Lichen prefers the external aspect of the limbs; eczema the internal.

*Psoriasis* is characterized by raised spots or patches of skin covered with dry white scales, with no moist secretion.

Chronic eczema may simulate psoriasis, but the scales will be found to have been formed by the drying of a moist exudation, and not by the cuticle from a dry red derma. The examination of the knees and elbows will often clear up any doubt.

*Pityriasis* cannot always be distinguished from the later stages of eczema except by the history of its occurrence. But if the disease, attended with desquamation, have been dry throughout and free from irritation, and the cutis be not thickened, the case is one of pityriasis.

*Herpes* has larger vesicles than eczema; they have a longer duration, and do not rupture readily; the resulting ulceration is deeper and more circular; in herpes there is no successive formation of vesicles on the same spot, as there is in eczema.

*Erysipelas* differs from acute eczema in its tendency to spread rapidly to adjacent parts; the redness is uniform, not punctiform; the edge of the eruption is abrupt, and there is often much swelling; bullæ form rather than clusters of vesicles; the burning heat, pain, and tension are greater.

For the diagnosis from scabies, see under the description of that disease.

The *anatomical seat* of eczema was believed by Cazenave to be the sweat-ducts; this view is not confirmed by more recent careful observations. It seems to be in the Malpighian layer of the epidermis, not unfrequently close round the orifices of hair follicles.

*Eczema rubrum* is a term given to that form of the disease in which the affected part is very red. All cases of severe eczema are red at first, but this name is given to those cases in which the redness is more persistent. It is usually attended with constitutional disturbance, and there is sometimes subcutaneous swelling. At the onset it resembles erysipelas, but the margins are not so abruptly defined, and several parts are attacked at the same time; it seldom affects

the face, which is the common site for erysipelas. When vesicles appear, all doubt is removed; in erysipelas, bullæ are found, and not groups of minute vesicles, such as are met with in eczema. When eczema is limited to a well-circumscribed patch it is called *eczema figuratum*; this variety is frequently seen on the hands and arms; it is often very obstinate. It is closely allied to lichen circumscriptus, and generally arises in the first instance from irritant substances applied to the skin.

Eczema presents different characters according to its situation. It is either *general*, affecting a great extent of the surface of the body, or is limited to special regions, from which it receives distinctive names. The chief of these are Eczema capitis, E. aurium, E. mammæ, and E. manuum.

*Eczema capitis* is common in children; the discharge is usually yellow, from the admixture of sebaceous secretion; there is also an excessive production of epidermis. In other cases the fluid becomes rapidly purulent. The hair becomes matted together, and there is left, as the disease subsides, an accumulation of epidermic cells, which gives the case the characters of pityriasis, from which it is distinguished by the presence, at an early period, of albuminous secretion. It is not very common in adults, except by extension from the ears. Eczema capitis, in the dry stage, may resemble *psoriasis capitis*; but the latter is perfectly dry, does not usually itch much, and is generally accompanied with psoriasis of other parts.

Eczema capitis may be confounded with *tinea tonsurans*, but a close observation of the hairs will show in the latter that they are broken off, twisted, and sheathed with a fine white deposit; the patches are usually circular, and there is not much itching, or commonly any moist discharge.

In *Eczema aurium*, the part affected is the groove behind the pinna, where it exists often for a long period as a red-

dened oozing surface, with painful fissures at the point of union of the pinna with the scalp, or as a mere dry reddened surface. It is often very chronic, and is liable to acute exacerbations, when the disease will extend into the auditory meatus, over the scalp, or to any other part of the surface of the body. Temporary deafness may result from the dryness and thickening of the walls of the meatus.

*Eczema of the breast* is commonly met with during lactation, less frequently in pregnancy, in fat people, or in scabies, which should be suspected if there be neither of the other conditions present.

*Eczema of the hands*, when acute, is very painful; the vesicles are not so rapidly formed, and from the thickness of the cuticle they attain a large size, and become blebs, such as are seen in pemphigus. Some of the blebs disappear without rupture of their walls; the epidermis exfoliates, and a violet color remains beneath for a time. The epidermis is sometimes shed in large laminæ. *Chronic eczema of the hands* is generally due to direct irritation. It may arise from the handling of sugar, soda, strong acids, flour, and dyes of different kinds, so that it is met with in grocers, bakers, washerwomen, dyers, and potboys. There is from these causes either a mere erythema, a formation of papules when the case is called lichen, or a formation of vesicles when it becomes eczema. "Grocers' itch" is really eczema of the hands; "psoriasis diffusa" peculiar to washerwomen, and "psoriasis diffusa" peculiar to bakers, in Willan's plates X. and XI., are really cases of eczema. The dorsal aspect of the hands and fingers is more commonly affected than the palmar. There is a common form of eczema which attacks the bends of the knees and elbows in children of lymphatic temperament from five to twelve years of age.

*See* — *Eczema* is sometimes caused in women by disfunctions, or at the change of life. In the

lower limbs it is often secondary to varicose veins. Gout and rheumatism seem to predispose to eczema. The heat of the sun, or exposure to artificial heat, sometimes causes eczema; hence Willan's term *E. solare*. It is occasionally an hereditary disease. Scabies is a common cause of eczema. Besides the presence of an exciting cause, in a case of eczema there is usually some antecedent diathetic state.

*Treatment.*—In an acute attack, regard must be paid to the severity of the local symptoms, the age and the strength of the patient. It is well to commence the treatment with a purge, such as a calomel and colocynth pill, followed by a dose of senna and salts, if the patient be strong; and if he have a full bounding pulse, a quarter of a grain of tartar emetic will be a good addition to the aperient draught. This should be followed by a saline mixture, containing in each dose from one-tenth to one-sixth of a grain of antimony. In a less robust subject, with a little febrile excitement, a milder purge should be given, such as a draught containing two drachms of sulphate of magnesia, with bicarbonate of soda and tartaric acid, with syrup of lemon, in peppermint or caraway water. This may be followed by a saline containing liquor ammoniæ acetatis.

The diet should be very moderate for a few days, and stimulants entirely avoided. *Locally*, the parts may be bathed with warm milk and water and poulticed. If there be much burning heat complained of, a powder containing about thirty grains of camphor with a few drops of spirit, and three or four drachms of oxide of zinc and the same quantity of starch, will be found useful before the poultice is put on. If the case come under notice at a later stage, the remedy which will be found most generally useful is arsenic given in the same way as is recommended in psoriasis. For infants at the breast it is well to give the mother or nurse the ordinary adult dose of an arsenical mixture, and the child

in this way gets arsenic in the milk in a form best suited for its alimentary canal.

Small doses of iodide of potassium, about two or three grains, with a quarter of a grain of iodine, are by some combined with the arsenic. If there be any suspicion of a syphilitic taint in the system, the combination of small doses of iodine, mercury, and arsenic, in the form of Donovan's solution, will be useful. If the patient is of a rheumatic or gouty diathesis, the use of colchicum will be found of great benefit. Sulphur is strongly recommended by some dermatologists, especially in lymphatic subjects, and in the later stages. The waters of Moffat or Harrogate in England, or Enghiens or Barèges on the Continent, will be the best vehicles for administering this remedy. Alkalies, such as the liquor potassæ, or the bicarbonate of potash, in full doses well diluted, are useful in some cases. When the patient is strumous and ill nourished, cod-liver oil and steel wine will be the best remedies; in some cases the combination of cod-liver oil and arsenic is of service. During the administration of any of these medicines the bowels must be regulated by an aperient containing sulphate of potash and rhubarb, or a few grains of blue pill, and the diet should be simple; pork, cheese, highly spiced food, pastry, and all indigestible things must be prohibited.

Locally, the crusts should be removed by the use of bread-and-water poultices. If the poulticing alone is not enough, oil may be applied and allowed to soak in for an hour, and the crusts then removed; if the parts attacked be hairy, the hairs should be cut to facilitate the removal of the crusts. If the extent of surface involved be not very great, and especially on the scalp, an ointment consisting of olive oil and lard in equal proportions, with ten grains of the red oxide of mercury to the ounce, is a good application. In other cases the citrine ointment diluted in the proportion of one to six or eight is better.

Hydr. bisulphureti gr. vj;

Hydr. oxidi rubri gr. vj;

Adipis ʒj;

Is a favorite formula of Mr. Startin.

The simple zinc ointment, or the benzoated zinc ointment (Bell's formula), is a good application where the eruption is very widely spread; the addition of a small quantity of camphor to this ointment tends to allay the burning sensations and the itching. When this last symptom is very severe, cyanide of potassium may be added in the proportion of from four to eight grains to the ounce of ointment.

A very useful application in cases of chronic eczema is common tar (*pix liquida*) or the pyroxylic oil of juniper (*huile de cade*), which is less disagreeable. Either of these preparations should be rubbed firmly into the part and allowed to dry on; it may be applied once or twice daily, the parts affected being washed with soap each time before the tarry application is renewed. If there is much thickening of the skin, as is often the case in eczema of long standing, strong alkaline preparations have been found useful. They are much used by Hebra and others on the Continent, and are highly recommended by Dr. McCall Anderson of Glasgow. I have recently used them with considerable benefit. Soft soap, either alone or with two parts of water, a little oil of rosemary or lavender being added to conceal the odor, is one method of using alkalies, and is suitable for cases where the thickening is not great or the rash widely spread. A piece of flannel dipped in the solution should be rubbed firmly on to the part night and morning, and the solution allowed to dry on; but the remains of it should be washed off before each reapplication.

A neater application is *liquor potassæ*, which may be applied to the part by means of a large brush night and morning; if the smarting is excessive, cold water should imme-



diately succeed its use. In the mildest cases a solution of potassa fusa, two grains in the ounce of distilled water, may be used; and in cases with greater infiltration of the derma stronger solutions should be applied, containing in the ounce five, ten, or even twenty grains of potassa fusa. The stronger applications should not be intrusted to the patient, and should be applied only once daily, cold water being used immediately after them. Where the eruption is very circumscribed and very obstinate, Hebra uses a still stronger solution, such as one drachm of potassa fusa to two drachms of water. This must be used very cautiously, and washed off at once. These caustic solutions should not be applied so as to cause manifest destruction of skin.

Whilst these strong alkalies are being employed, the patient may make use of cold water freely, either by means of cloths dipped in it and kept constantly applied, or by a continual dripping on to the part if there is great heat.

The combination of tar, spirit, and soft soap in equal parts is in some cases very beneficial, and is strongly recommended by Dr. Anderson.

In small circumscribed patches of eczema, which are usually very obstinate and less amenable to constitutional treatment than the diffused forms of the disease, no application is better than blistering fluid. A convenient way of preparing this is to dissolve two grains of cantharidin in two drachms of spirit, and add six drachms of glacial acetic acid. This may be applied to the part with a camel's hair brush; one application will be sufficient, but if it be not enough it may be renewed at the end of a week, and will very shortly effect a cure in the majority of cases.

The question has frequently been discussed whether it is not dangerous to attempt to arrest such a disease as eczema when it has existed for a long period and been accompanied with abundant secretion. Numerous cases are quoted in

which coincidently with the disappearance of the skin affection more serious symptoms have manifested themselves, and even death has followed. It is difficult to say whether there is ever what is understood by metastasis in these cases, or whether the disappearance of the skin affection is not rather an effect of the general or internal derangement. It is possible that in chronic eczema the system may become dependent, from habit, on a free discharge from the surface; and when this ceases there is determination of blood to some internal viscus. If this be so, a seton or issue might be a useful measure, and is one to which I should be disposed to resort in a case like that of A. N., reported at p. 119.

## HERPES.

(Neligan's Atlas, Plate IV.)

This term is now used with the meaning which was attached to it by Willan, to designate a common acute, non-contagious, vesicular disease.<sup>1</sup>

The characters common to all the varieties of herpes are vesicles occurring in groups, similarity of the vesicles in one group, difference of the vesicles in different groups, an acute course, and spontaneous disappearance.

The clusters of vesicles appear on an inflamed base, which is commonly the seat of a burning sensation; they are larger than those of eczema, do not burst so quickly, and the contents of them very rapidly become milky. The vesicles and their contents dry up into a thin pale-brownish scab. The clusters vary much in size and shape. The fluid in the vesicles is slightly alkaline, or neutral when clear, and slightly acid or neutral when it becomes turbid; it is never so strongly

<sup>1</sup> It was employed by the ancient writers, and by Alibert in modern times, to designate a class of chronic skin diseases characterized by their obstinacy, their tendency to spread, and by itching; they were not contagious, but usually hereditary.

alkaline as the fluid secreted in eczema. A common seat of herpes is the upper lip, where it frequently occurs during a cold, or after a few days' febricula, or in the course of pneumonia or other acute disease. It begins by redness and heat on a small patch, on which vesicles shortly appear. In two or three days, the fluid having become turbid, a thin brown scab is left, and in two or three days longer the scab falls off and the patch is gone, leaving a purplish stain, which disappears after a few more days. This variety of herpes is called herpes labialis.

Another common seat of herpes is the foreskin, when it is called *herpes preputialis*. It may occur on the outer orifice of the prepuce, or on that part which is extended over the glans penis. The vesicles very quickly run into each other, and form a small excoriation or ulcer which may closely simulate chancre, having a white base and elevated margin. It is very important not to confound this variety with a specific sore, as it requires no treatment and will spontaneously recover in a week or ten days.

Herpes is often found in the mouth, on the uvula, and on the tongue. On the mucous membranes the vesicles are only seen at their outset, because the tender epithelium only retains the fluid exuded under it for a very short time, so that a white spot is left, produced by maceration of the epithelium, or, if this is removed, a shallow excoriation. There is not any crust formed, owing to the constant soaking of the part in saliva and mucus.

Herpes of the pharynx may cause a troublesome angina, which will simulate diphtheria in appearance, and may even lead to laryngeal obstruction of an alarming character. In the mouth, herpes closely resembles aphthæ; these are, however, due to the development of a parasite, which can be readily seen on microscopical examination.

*Herpes phlyctenodes* is a term used to designate clusters of vesicles, such as those above described, occurring on other parts with no definite arrangement. The patches are often larger and the individual vesicles larger than in herpes labialis. The eruption is commonly preceded for a day or two by slight feverishness, which may continue for a short time after the eruption has appeared; fresh crops of vesicles may arise during six or seven days. A common situation for these clusters is the face, but they are also met with on the trunk and extremities, and often appear in more than one place at a time. The eruption usually runs its course within a fortnight, sometimes within eight or nine days.

*Herpes zoster, zona*, or the *shingles*, exhibits characters precisely similar to herpes phlyctenodes, but is peculiar from the number and arrangement of the clusters.

Originally the term was employed only for those cases of herpes which occurred on the trunk, especially the chest, being limited by the median line to one-half of the surface. Later writers, especially Hebra, have used it to include all cases limited to one side of the median line (whether on the head, the trunk, or the limbs), which follow in the arrangement of the clusters the course of the cutaneous nerves.

In this way Hebra describes the following varieties, named according to their situation: 1. *Zoster capillitii*. 2. *Zoster faciei*. 3. *Z. nuchæ*. 4. *Z. brachialis*. 5. *Z. pectoralis*. 6. *Z. abdominalis*. 7. *Z. femoralis*.

At first red patches are seen, of variable extent, from a quarter to half an inch in diameter; then vesicles from eight to twenty in number, from the size of millet-seeds to that of hemp-seeds, appear on these patches. Some of the vesicles run together and form blebs, whilst others remain distinct; the contents become milky, and, together with their walls, they shortly dry into a brown crust, which falls off and leaves the part healed. Sometimes there is a grayish or

The first symptom is a burning or itching sensation, which is usually accompanied by a redness of the skin. This is followed by the appearance of small, clear vesicles, which are often grouped together in clusters. These vesicles are usually about the size of a pinhead, and they contain a clear, watery fluid. The vesicles are usually surrounded by a red, inflamed area of skin.

The vesicles are usually accompanied by a burning or itching sensation, which is often very severe. This is due to the fact that the vesicles are surrounded by a red, inflamed area of skin, which is very sensitive to touch. The vesicles are usually accompanied by a burning or itching sensation, which is often very severe. This is due to the fact that the vesicles are surrounded by a red, inflamed area of skin, which is very sensitive to touch. The vesicles are usually accompanied by a burning or itching sensation, which is often very severe. This is due to the fact that the vesicles are surrounded by a red, inflamed area of skin, which is very sensitive to touch.

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1. Cases in which clusters of eruption, either some or all of them, do not exhibit the usual characters: there is no formation of vesicles, but only papules, or they run on into

bullæ, or are converted into deep-seated pustules, leaving scars behind them; or,

2. Where the eruption occurs symmetrically on both sides of the body, or where only some clusters attain their proper development whilst others attain only to the stage of small points, and then disappear.

3. Where considerable neuralgic pains, both before the outbreak and after the drying up of the eruption, are felt, and continue for a long time, sometimes being accompanied by disturbances in the motor functions.

4. Where the contents of the vesicles are mixed with blood, and the immediate vicinity of the vesicles is infiltrated with blood. These cases are often attended with very severe pains.

*Zoster capillitii* is met with on the forehead and the hairy scalp, in the course of the supra-orbital nerve. Sometimes the eye is attacked, so that there is severe pain and injection of the conjunctiva and cornea, and the movements of the iris are sometimes interfered with, so that there may be a suspicion of iritis. In other cases, zoster commences behind, proceeding from the occiput, in the form of an arch over the parietal bone to the frontal suture. This form can only be clearly made out in persons who are nearly or quite bald.

*Zoster faciei* appears on the cheek, and extends upwards to the nose.

*Zoster nuchæ* appears in the neighborhood of the second and third cervical vertebræ, from this point stretches partly upwards to the lower jaw and the face, partly horizontally towards the larynx, and partly downwards towards the second rib.

*Zoster brachialis* begins in the neighborhood of the fifth, sixth, and seventh cervical and first dorsal vertebræ, and extends to the upper limb, on the aspect either of extension or of flexion, but especially the latter, as far as the elbow, or even to the hand, in the course of the ulnar or radial nerve.

*Zoster pectoralis* runs in the direction of the ribs, from back to front. The skin of the breast is not avoided, as has been asserted by some writers. The pains in this form are sometimes so severe and so much aggravated by respiration as to cause dyspnoea, and lead to the suspicion of pleurisy.

*Zoster abdominalis* runs from the lumbar vertebræ forwards, and ends at the middle line; sometimes clusters of vesicles appear on the mons veneris. This variety is sometimes accompanied with much pain in respiration.

*Zoster femoralis* appears partly on the front and partly on the back of the thigh. It begins at the nates, to which it is sometimes limited, in other cases extending to the popliteal space or the calf.

Before the outbreak of any eruption of herpes zoster there are felt painful sensations more or less severe, which are not, however, so characteristic as to supply a means of diagnosis until the peculiar eruption makes its appearance.

The duration of an attack of herpes zoster varies from two to four weeks.

*Causation.*—It is said to be more common in spring and summer than in winter, and to be sometimes due to exposure to cold or damp, or to sudden emotion, especially anger.

*Treatment.*—This is mainly expectant. A mild aperient should be given at first. A little oil is to be spread on the vesicles, and starch sprinkled on it, with or without oxide of zinc. If the vesicles are inflamed, a bread-and-water poultice should be applied for twelve or twenty-four hours, and this followed by a powder of starch and oxide of zinc. In case of sloughing, the sores may be treated with nitric acid and opium lotion, and the health sustained by tonics, nourishment, and stimulants. In cases of severe neuralgia, belladonna and chloroform are useful, in the form of liniment or ointment, or morphia used endermically; and internally, narcotics and quinine should be given.

*Herpes iris* is a rare form of the disease. It occurs in a circular patch about the size of a sixpenny piece, or larger, and is made up of concentric rings which are of different colors according to their stage of development. The centre consists of a solitary vesicle, whilst outside appear two, three, or even four rings of vesicles, which run the usual course of herpetic vesicles. It is not attended with any constitutional symptoms; it is confined to the young, and its common seat is the back of the hand, the palm, or the instep. It requires no special treatment.

*Herpes circinatus* is another variety in which the cluster assumes a circular shape. Hebra maintains that it always takes its origin from herpes iris. The vesicles are placed on a slightly elevated ring, varying in breadth from the one-twelfth to one-third of an inch, and the characters of the circle vary from a quarter of an inch to two inches. I shall not describe here what has been called by Dr. Jenner the *furfuraceous* form of herpes circinatus, because that belongs more properly to the parasitic order, and in some cases is rather erythema than herpes. In the true herpes circinatus the vesicles are plainly visible; their contents, at first transparent, soon become turbid, and give rise to a thin brownish scab; a second crop of vesicles sometimes follow, but the affection commonly runs its course in eight or ten days. The parasitic herpes circinatus will be described in the chapter on *Tinea tonsurans*.

## PEMPHIGUS.

(Nelligan's Atlas, Pl. V. Figs. 1, 2.)

This disease, which was placed by Willan and Bateman in the order Bullæ, is one about which there is a good deal of discrepancy amongst different writers. The characteristic feature is the eruption of blebs, varying in size from that of



a pea to that of an orange, or even larger, containing a transparent yellowish fluid. On the bursting of the bleb a brownish crust is left, from the drying of the contents and the wall of the bleb. There is usually a red spot preceding the formation of the bleb. The bleb is rounded or oval, and its contents are usually alkaline, although stated by many writers to be acid. It is sometimes surrounded by a narrow circle of redness, though more frequently seen without any such margin. Willan gave the name pemphigus to the cases in which there was a red inflamed edge to the bullæ, and a disposition to ulceration after rupture; whilst the cases in which there was an eruption of bullæ, without any inflammation around them and without fever, breaking and healing without scale or crust, he described under the name of *pompholyx*. The two terms have since been used almost indiscriminately, and I propose to drop the latter name altogether.

The bullæ sometimes contain a false membrane, such as is seen occasionally in the fluid of pleurisy. In other cases the contents rapidly become turbid and purulent; the fluid then exhibits an acid reaction. Sometimes the contents of the blebs are reddened, from the coloring matter of the blood.

Bullæ, though commonly of the sizes above mentioned, occasionally attain much larger dimensions, even as much as five or six inches in diameter. This was the case in a patient referred to at page 143.

Each bulla is usually preceded by slight redness, but no elevation of the skin, and the outbreak is sometimes attended with severe tingling. The number of bullæ varies indefinitely from one or two to dozens or scores. They are sometimes found in groups, at others they occur singly. At the end of a few days the bullæ are ruptured, and their contents escape. Sometimes the dried epidermis remains in contact

With the subjacent skin, which heals up, and a purple stain is left, which disappears at the end of some weeks. The surface on which the bleb was formed often continues for some time to pour out a serous fluid, which dries into a yellowish crust; this is often re-formed as often as it is removed; after a time the exudation ceases, and a purple stain is left, which gradually disappears. The crust is something intermediate in thickness between that of eczema and that of impetigo. When the epidermis forming the wall of a bulla is removed, an excoriated red surface is seen. If ulceration of the derma exist, it is very superficial.

When pemphigus is generalized, the eruption is seen in different stages of development on different parts of the body. At one part it is a reddened surface, where the cuticle is beginning to be wrinkled; at another a bleb is formed; at another the cuticle is exfoliating, and leaves sometimes violet-colored stains, sometimes superficial ulcerations or excoriations, either bare or covered with crusts.

Pemphigus is met with on any part of the surface of the body. When it affects the scalp, the palms of the hands, or soles of the feet, distinct bullæ are rarely seen. It occasionally occurs on the mucous membrane of the genitals and of the mouth.

Alibert described it as extending to the intestines, but he gives no post-mortem evidence of it. The symptoms on which he bases his statement were, a sense of pain in the stomach and intestines, and diarrhœa.

Pemphigus is said to be either acute or chronic. Except in new-born infants, it is excessively rare as an acute disease. Hebra states that he has never met with it. He thinks that many cases have been so described which should have received other names. For instance: 1. Bullæ, met with in different acute specific diseases; for example, variola, puerperal fever, and dysentery. 2. Some cases of herpes,

a pea to that of an orange, or a parent yellowish fluid. On the yellowish crust is left, from the wall of the bleb. There is the formation of the bleb, and its contents are not many writers to be admitted a narrow circle of red without any such margin as is seen in the cases in which the bullæ, and a difference whilst the cases in which the bullæ are formed without any inflammation, breaking and healing under the name of *scrophulous* has been used almost exclusively, the latter name alone.

The bullæ is seen occasionally, the contents red, then exhibits the blebs and blood.

Bullæ, occasionally as five or six patient's

Each elevation with nitely times end escape

The pe watch have becom described und Some cas

described by various an eruption some authors are head. Dr. Bell, in an article on Epistaxis the idea that the scrophulous. The mere acute specific disease have that it is essential more reasonable to as a complication, just course of scarlatina or

is a grave disease. It is commonly on the extremities and soles of the feet. The purple tint, then upon the size of a large pea and. The contents of the purple color, and they are margin. When the contents ulcerated and covered by the formation

children who at birth look strong the appearance of the eruption they their complexion assumes a yellowish mounting soon set in, which lead on com-

monly to a fatal result. More rarely the blebs collapse; crusts are formed which dry and fall off, leaving a small scar, and the little patient recovers.

This form of disease is by many regarded as an indication of syphilis, amongst others by Jörg, Cazenave, Devergie, and Ricord; whilst Bazin, Gilibert, Diday, and others take an opposite view. The question is not yet decided. It is certainly sometimes seen in children whose parents have been syphilitic.

Infants are occasionally the subjects of pemphigus of a much less serious character. Blebs appear on the neck or chest containing a pale fluid; they rapidly increase in size, and give rise to excoriations which are soon covered with a yellowish crust. Healing soon takes place, and the child recovers.

There are a few cases on record in which a bullous eruption, having most of the characters of pemphigus, has been met with in adults as a syphilide.<sup>1</sup> In these cases there were either other forms of syphilitic eruption and other manifestations of syphilis, or the arrangement of the blebs assumed a circular form, and spread in a serpiginous manner, whilst ulceration resulted on the separation of the crusts, and usually the vicinity of the hands and feet was attacked. Some of the cases described as pemphigus should rather have been called rupia.

*Chronic pemphigus* (by far the most common form) is characterized by the appearance of bullæ which succeed each other in crops in a very pertinacious manner. Scarcely has one crop healed when a new set of blebs make their appearance; occasionally a longer interval is left between succes-

<sup>1</sup> Waller of Prague. Vierteljahrsschrift, 1849. Ricord; 25th plate, Clinique Iconograph de l'hôpital des Vénériens. Suchanek, Leudet, and Buchanan also report cases. Paper by Dr. Buchanan in Glasgow Medical Journal, July, 1864.

sive outbreaks, and the patient is just considered well when a new eruption occurs. Patients usually suffer in general health, losing flesh and strength; diarrhoea sometimes occurs, and gradual emaciation leads on to death. The disease lasts months, or even years. Each crop is sometimes preceded by febrile symptoms.<sup>1</sup> Anasarca is said to ensue, without the presence of albumen in the urine.

The fluid in the bullæ of pemphigus is albuminous, coagulating readily with heat. Examined by Simon it was found to be of an acid reaction, and to deposit a sediment of corpuscles resembling mucus or pus-corpuscles in form, with a distinct nucleus. The specific gravity was 1011. It was composed of the following ingredients:—

Water . . . . .	940.0
Solid constituents . . . . .	60.0
Fat, containing cholesterin . . . . .	2.6
Albumen with earthy phosphates . . . . .	48.0
Extractive matter soluble in alcohol, with lactate of soda and chlorides of sodium and potassium . . . . .	6.5
A substance resembling ptyalin, soluble in water . . . . .	1.9
Free acetic acid and mucus-corpuscles, imponderable.	

In the same patient, five years later, the fluid had much the same physical characters. It contained in 1000 parts—

Water . . . . .	859.8
Solids . . . . .	40.2
Albumen, with mucus-corpuscles . . . . .	28.1
Fat . . . . .	3.0
Alcohol extract . . . . .	3.0
Fixed salts . . . . .	4.5

The fluid was strongly acid, from the presence of acetic acid; no indications of urea were detected.

<sup>1</sup> William Bird, U. C. H., Vol. I., page 258.

Other authors state that the blebs contain an alkaline fluid, and in the cases which I have examined the reaction has been alkaline, unless the fluid was purulent, and then it was acid. In one patient (Jane Read, U. C. H., Vol. I., 254), the reaction was strongly acid, though the contents were not decidedly purulent. A month later the contents of a bleb on this patient were strongly alkaline. Uric acid has been occasionally found in the fluid. I found traces of it in one patient (Emma Wilson), but failed to discover it in another case in which I looked for it. In gouty patients it has been found (as might be expected) to contain uric acid.

A specimen of the urine of a woman suffering from pompholyx, which proved fatal, was analyzed by Heller; it was acid, and had a specific gravity 1017.5. It contained in 1000 parts—

Water . . . . .	955.8
Solids . . . . .	44.2
Urea . . . . .	24.63
Uric acid . . . . .	0.58
Extractive matters . . . . .	11.79
Fixed salts . . . . .	7.2

Of the fixed salts, the earthy phosphates were normal, the sulphates much increased, and the chloride of sodium proportionally diminished. The urea was above the normal average.

These analyses of urine are of little value unless it is known how much urine is passed in twenty-four hours or a longer period, and the specimen examined is taken from the mixed urine passed at different times of the day.

The following results were obtained for me by Mr. Gee. The patient, G. F. S. W. A., aged seven years, the subject of severe recurring pemphigus, weighed 45 lbs., or 20.4 kilogrammes.

On the 16th January he passed in twenty-four hours 483 cubic centimetres, or 17 ounces of urine of acid reaction, with a specific gravity 1033; it contained 18.837 grammes, or 290 grains of urea, and 3.864 grammes, or 59 grains of chloride of sodium.

On the 23d January he passed 410 cubic centimetres, of a specific gravity 1033, which contained 16.81 grammes of urea, and 3.69 grammes of chloride of sodium. Of uric acid there was 0.494 gramme in the twenty-four hours.

On the 24th January there were 415 cubic centimetres of urine, specific gravity 1033; urea, 15.251 grammes; chloride of sodium, 3.486 grammes; uric acid, 0.581 gramme.

January 26th.—Urine, 515 cubic centimetres; urea, 18.797 grammes; chloride of sodium, 4.532 grammes; uric acid, 0.468 gramme.

The averages of the four days' observations are—Urine, 456 cubic centimetres, or 16 ounces; urea, 17.424 grammes, or 268.8 grains; uric acid, 0.514 gramme, or 7.93 grains; chloride of sodium, 3.893 grammes, or 60 grains.

This gives, in proportion to the body weight, 0.854 gramme of urea to each kilogramme, 22.3 cubic centimetres of urine; 0.19 gramme of chloride of sodium, which is equal to 0.117 of chlorine; and of uric acid .025 gramme to each kilogramme of the body's weight.

From these results<sup>1</sup> it appears that there was an unusually small amount of *water* passed by the kidneys, about an average amount of urea, an abnormally small quantity of chlorine, and an excess of uric acid. If a single specimen of this boy's urine had been analyzed, without reference to the quantity passed in the twenty-four hours, we should have come to the conclusion that there was a great excess of urea, a result due not to the quantity actually secreted, but to the deficiency of water.

<sup>1</sup> See Dr. Parkes on the Urine, pages 24 and 44.

At the time these observations were made the boy was taking an ordinary hospital full diet for a child of his age, with no undue proportion of nitrogenized food.

It is stated by Bamberger (Schmidt's Jahrbücher, vol. 108, p. 320), that there is a great deficiency of albumen in the blood of patients with pemphigus. Bamberger found that the urine of a patient with pemphigus, on an average of ten days, amounted to 472 cubic centimetres, about one-third of the normal quantity passed by a healthy adult, with a specific gravity of 1025. There was a deficiency of the ordinary solids generally, except uric acid, but an especial deficiency of phosphoric and sulphuric acids; of the first 1.54 gramme, or 23.7 grains, instead of about 48 grains; and of the second only 0.13 gramme, or 1.7 grain, instead of about 30 grains.<sup>1</sup>

Bielt stated that fatty liver was almost constantly met with in patients who died of chronic pemphigus.

Hirtz reports a case of chronic pemphigus in which amyloid degeneration of the liver and spleen was found after death (Schmidt's Jahrbücher, vol. 119, p. 183).

*Causation.*—Pemphigus occurs at all periods of life. It is most common between four and twenty-five years of age. It affects those of fair complexion more than others. It is generally coincident with temporary cachexia, but is not associated with any particular diathesis. It is not much influenced by season, or a damp residence, or bad living, as commonly stated. Pregnancy is assigned as a cause.

*Treatment.*—Locally, in the first instance, emollients, such as cold cream, milk and water; or slight astringents, the unguentum zinci, or the benzoated zinc ointment. The blebs should be punctured with a needle or lancet as soon as they appear. If there be much discharge from the denuded surface, a lotion, containing in the ounce from ten to twenty or

<sup>1</sup> See Dr. Parkes on the Urine, pp. 14, 15.



thirty grains of nitrate of silver, with or without ten or twenty drops of dilute nitric acid, will be found of service, and promote the healing. Tonics are indicated, and a nutritious diet. In chronic cases I have seen nothing exert a real influence on the progress of the disease except arsenic, given as recommended for psoriasis. This certainly does good, and frequently cures the disease. (The cases of E. W. and G. F. S. W. A. were illustrations, see pages 149 and 150.) The patient improves in general condition under its employment, and the eruptions of bullæ are prevented. The combination of iron with arsenic is in some cases of service.

There are two varieties of pemphigus described by M. Hardy, namely, pruriginous pemphigus and foliaceous pemphigus. M. Hardy says that in the former affection the skin presents small blebs, the volume of which seldom exceeds that of a pea; they contain sometimes serosity, and sometimes pus. The peculiarity of the malady is, that it is attended with most distressing itching, so severe as to prevent sleep. Patients scratch themselves furiously, and leave the marks of their nails in the form of long excoriations and black points. As in other diseases attended with much itching, the skin becomes of a brownish hue by an increased production of pigment.

There is also a secretion of a faint nauseous odor, moistening the skin, and giving it a greasy appearance, like the integument of a slug. M. Hardy records the case of a woman who, during eight successive pregnancies, had suffered from this affection from within a few weeks of each conception. The symptoms continued to be worse and worse until her delivery, after which they gradually disappeared until a few weeks after the beginning of her next pregnancy. These cases are not at all common; some of them would seem to be combinations of prurigo and pemphigus.

Foliaceous pemphigus (*P. foliacé*) is thus described: It is

characterized by fine scales, yellow or gray in color, turned in upon their margins, half detached, and invading the entire surface. The scales resemble fragments of parchment or layers of papyrus. Their size varies from three-quarters of an inch to two inches. No part of the body is free from them, and they are so freely produced that they fill the patient's bed in a few hours. Under them is found a red surface, slightly ulcerated, from which flows in small quantities a secretion, slightly plastic. These ulcerations, usually superficial, may acquire in some cases a greater depth in consequence of scratching, or from pressure; this is especially seen near the knees, elbows, and nates. The itching is not commonly severe, but there is usually oozing from the skin an abundant sweat-like secretion, having a nauseous fetid odor. This form of pemphigus may assume from the onset a foliaceous appearance, but usually begins by being bullous, then the blebs become less and less distinct, and at length are quite abortive. The disease then takes the form which has been described, and which it continues to preserve. Sometimes, when the disease has lasted a long time, isolated blebs still make their appearance, which run their ordinary course.

I have never seen a case of this kind. It seems closely to resemble pityriasis rubra of Devergie, but is clearly something more than pityriasis, from the occurrence of a copious discharge, and from the occasional formation of blebs. Devergie speaks of pemphigus as an occasional complication of pityriasis rubra.

It appears to me to be an error to call any cases by the name of pemphigus, the blebs of which begin in the form of tubercles or large papules. An illustration of this error is afforded in the report of a case given in the *Lancet* for January 2d, 1864, by Mr. Nayler. It is given as a case of syphilitic pemphigus. The eruption began as large papules,

some of which ran into each other, and formed larger raised erythematous patches, and on some of these the cuticle became raised by the secretion of a serous or purulent matter. One of the most distinctive features of pemphigus is the absence of exudation *into* the cutis, so that there is no elevation except what is caused by the fluid which detaches the cuticle.

*Diagnosis.*—This is referred to when treating of eczema of the hands, erysipelas, and rupia.

The *prognosis* in pemphigus is not favorable as regards the prospect of a rapid cure. It is a disease attended usually with much debility, and exhibiting a great tendency to relapse. In severe cases, diarrhoea and emaciation, with excessive discharge from the blebs, carry off the patient.

In the cases I have seen, patients have recovered after a time, but in several cases there have been relapses; and even when the disease is cured, the patient is often in a weak state.

*Pemphigus of Three Years' standing, first making its appearance a Month after Vaccination.*

W. B., æt. six years, living in a very dry and healthy village in Berkshire. His mother died when he was six months old. He has one or two brothers and sisters quite free from any affection of the skin. It is stated that he was quite healthy until he was three years old; at that age he was vaccinated, and the wound healed well. A month after this a rash, similar to that he now suffers from, made its appearance. He has never been free from it since, except in the colder parts of the year, a succession of eruptions making their appearance every few weeks. The parts affected have always been the face, neck, and hands. Before the occurrence of an eruption there is usually for a few days loss of appetite and febrile disturbance. When the blebs first appear

they are clustered together, and are of the size of split peas, with a pale yellowish transparent fluid in them. The blebs soon burst, and a thickish yellow crust is left, with an excoriation of the skin under the crust.

May 11th, 1863.—He was ordered the following medicine:—

Liq. arsenicalis ℥ij.

Aquæ ℥ij. Ter die.

May 17th.—Not so well; a fresh eruption just making its appearance:—

Acid. nitro-mur. dil. ℥iij.

Magn. sulph. ℥ss.

Sp. æth. nitr. ℥ij.

Aquæ menth. ℥iij, misce.

℥ij ex aqua ter die.

July 8th.—I lost sight of him till now, and am informed that, as he did not get rapidly better, he was given over to the care of an old woman, who gave him ground-ivy and elder-flower infusion, both internally and as a lotion. He also had some drops, which tasted like bark, twice a day. Under this treatment he rapidly improved, and I heard in December that he had passed through the summer with much less of the disease than for three previous years. In May, 1864, I heard that the eruption had returned this spring, especially on the scalp, and that the old woman's remedies were now ineffectual.

*Recurring Pemphigus, cured by arsenic, resisting a variety of other remedies.*

E. W., a tolerably healthy girl, of sallow complexion, brown hair, and dark eyes, aged five years, living in a well-drained locality. She came to me at the Children's Hospital in May, 1863, with the following history: Five months pre-

viously she had for the first time an eruption of blebs on the right side of her nose, which soon spread over her face. Six weeks later a similar eruption appeared on the thighs, and since then there have been successive crops of the same kind at short intervals. She is weak, and suffers much from the irritation attending the rash.

I ordered her quinine and nitro-muriatic acid, and to use zinci oxidi ʒj; pulv. amyli ʒiij, locally.

On June 6th, no improvement had taken place. Numerous blebs, averaging in size that of a pea or horsebean, clustered near each other, were constantly appearing. Their contents were clear yellow, and of faintly alkaline reaction. There was no red margin around the blebs. The surface on which they were formed discharged copiously, forming a thick brown crust which lasted a long time.

After trying a number of medicines, on 8th July I ordered liquor arsenicalis, in doses of four minims three times a day. In the course of a fortnight she was much better. The medicine was stopped, and the rash soon returned. It was again repeated, and with a speedily favorable result. She continued under observation for twelve months, during which time she took arsenical mixture, with short interruptions of a week or fortnight occasionally, the disease constantly returning when she had omitted the arsenic for a week or ten days. By July, 1864, she was in much better health, and the rash had not appeared for more than six months.

*Severe Pemphigus.—Erythema circinatum.—Arsenical Treatment.—Cure.*

G. F. S. W. A., a boy, with light hair and clear complexion, aged seven years. His mother died when he was an infant. He is said to have had a rash, and to have snuffled when he was an infant, but since then has had good health, with the exception of his having measles, scarlatina,

hooping-cough, and smallpox, all of which he passed through well. He has had plenty to eat and drink.

He came to the Children's Hospital on 23d November, 1863. Two months before some small blebs appeared on his fingers; they had clear contents, formed crusts, and fell off; they were soon followed by others, larger ones appearing each time.

On admission the following notes were taken: Skin generally dry, surface cool, face free from eruption. On the front of thorax are a number of circular patches, varying in diameter from one-third of an inch to two or three inches; the margins are pink, or in some brownish, and are about one-eighth of an inch wide; the central portions have a yellow tinge; they are not elevated or at all tender. They answer to the description of *erythema circinatum*. On the left elbow is a large livid discoloration, and in the centre of it is a thickish brown crust. On the left hand, the middle and fourth fingers, are two blebs the size of beans; on the right arm are two blebs with red fluid in them, and there are several purple stains, some with crusts and some without, the remains of blebs. On the thighs are several traces of former blebs, and some circles of erythema. Immediately below the right knee is an enormous bulla, measuring six inches by five, half filled with turbid fluid, and flakes in it. It is surrounded by a red margin. There is tenderness in the lymphatics of this thigh. Both feet are the seats of more or less recent blebs. Tongue coated posteriorly; pulse 180, weak.

R Pulv. ipecac. co. gr. vj hora somni.

R Pulv. rhei c. hydrarg. gr. x cras mane.

R Vini ferri 3ij ter die.

Solution of nitrate of silver 3j to 3j aquæ, to be painted on cuticle of broken blebs, and unguent. zinci on the excoiated surfaces.

December 2d.—A bleb, size of a sixpence, appeared at

right angle of mouth; one on left wrist. They appear without any antecedent redness or pain.

3d.—Liquor arsenicalis ℥iij.

Vin. ferri ʒij ter die.

10th.—One fresh bleb on finger; one with red contents on left ankle, and one on left thigh. All appeared to-day. Their average size is that of a pea.

21st.—Not much better: A bleb on right external ear, and one upon penis. Pulse 120; skin hot. There are crusts on head, almost like those of impetigo, but which have no doubt proceeded from broken blebs.

28th.—Large bleb on right foot, over dorsum and toes, two inches by one, with clear contents.

Liq. potassæ arsen. ℥iv.

Aqua ʒss ter die.

Jan. 4th.—Pulse 120, weak. By some oversight, his diet had not been so liberal as it had been ordered. He was now to have extra diet, and four ounces of wine daily. To take—

Mist. quinquæ ʒij.

Liq. arsen. chlor. ℥vj ter die.

13th.—Improvement. Pulse not so frequent, and stronger. Has had fewer blebs during the past week. Skin of trunk generally is dry, and in many parts there are small papules, pale, and almost translucent; they look like obstructed sebaceous follicles. There is a peculiar mousy odor from his skin. To have a warm bath every other day.

Feb. 11th.—No new blebs have appeared lately, and the sites of the old ones are healing. He seems stronger and more lively. Is taking now eight minims of the liquor arsenici chloridi.

• March 1st.—No fresh blebs. Is improving in general

condition. There is ulceration of gums round lower incisors. Pulse is still too quick and weak. Omit arsenic, and take cod-liver oil and steel.

March 15th.—One fresh bleb, with sanguinolent contents, on finger. Return to arsenic. Liq. pot. arsen.  $\mathfrak{m}$ iv ter die. Gums still ulcerated a little.

April 3d.—Has much improved. Is discharged cured.

RUPIA.

(Neligan's Atlas, Pl. V., Figs. 3, 4, 5.)

Is usually classed under the order Bullæ with Pemphigus. The elementary lesion in rupia is something between a large vesicle or bleb, and a pustule, and just as eczema runs into impetigo, rupia and ecthyma run into each other. Rupia is characterized by an eruption of isolated flattened bullæ or pustules. The contents, even at the outset, are seldom transparent; they are either sero-purulent or sanious. The blebs are seated on a *very slightly raised* base, and surrounded by a reddish-brown areola of inflammatory nature. They soon burst, and their contents dry into a dark-colored crust of varying thickness. When the crusts are thin, the disease is *rupia simplex*. Under the crusts, which, if not artificially detached, remain some time, there is found a grayish, unhealthy-looking ulcer, which is very sluggish and indisposed to heal, and a scab is readily reproduced upon it.

Rupia is often preceded and accompanied by febrile disturbance of a remittent character, with a soft compressible pulse; the skin is dry and harsh, and the tongue furred and red at the tip. In *rupia prominens* the bullæ are larger, the crusts are thicker, and the ulcerations deeper, and more disposed to spread at the circumference. As the ulcer extends, new secretion is formed under the crust first formed, which is therefore raised, and by a repetition of this process a conical shape is attained, like a limpet shell, or there is simple lami-



nation, more like the surface of an oyster-shell. When the scab falls, the ulcer heals slowly, and leaves a scar of purple color, which very slowly disappears.

*Rupia prominens* is a chronic disease, usually lasting for months, its duration being prolonged by a succession of eruptions. The usual situation for rupia is the lower limbs; it is also met with on the loins and shoulders. It is essentially a disease of debility, and is induced by want of nutritious food and cold, and the syphilitic cachexia. It is a little more common in women than men, and is more frequent in childhood and old age than in middle life.

*Rupia simplex* is common in children from five to eight years of age. It not uncommonly occurs as a sequel to measles or scarlet fever. It is occasionally complicated with purpura hæmorrhagica.

*Diagnosis.*—From *pemphigus*, rupia is distinguished by the bullæ being flat, not distended, and not so well defined, and by the crusts which follow the bullæ being thicker. Pemphigus blebs more commonly occur in groups, and are less frequently surrounded by a red margin than the blebs of rupia. On the removal of the crust there is seen in rupia distinct ulceration, but in pemphigus usually mere excoriation or very superficial ulceration.

*Ecthyma* is clearly allied to rupia. The elementary lesion is, however, a pustule, with a harder and more elevated base. The crusts are flatter and the ulceration less deep than in rupia.

*Syphilitic rupia* is characterized by a dull coppery tint around the bullæ, which are usually numerous. They are met with on all parts of the skin, even on the face, which is seldom attacked by non-syphilitic rupia. It is a common thing for the ulcers in syphilitic rupia to heal in the centre and extend at the circumference, giving rise to ulcers which are circular, or composed of segments of circles.

There is a disease which has been described by some as *rupia escharotica* (Bateman), by others as *pemphigus infantilis*, or *gangrenosus*. It appears to have more nearly the characters of *rupia* than of *pemphigus*. It is described as follows by Dr. Whitby Stokes, quoted by Corrigan in the *Cyclopædia of Practical Medicine*: "The approach of this disorder is sometimes, though rarely, denoted by a livid suffusion, like that of erysipelas, slightly elevated. It more frequently happens that the complaint comes on in perfect health. One or more vesicles appear, mostly larger than the best distinct smallpox; these increase for two or three days, burst, and discharge a thin fluid having a disagreeable smell; limpid in most cases, sometimes whitish and sometimes yellowish, the latter less dangerous; usually the weaker a child's constitution is, the thinner is the matter. Before or after breaking, the vesicles run together, the sores become painful with loss of substance, and there is a thin fetid ichorous discharge; the edges of the ulcer are undermined, and it spreads quickly. The most usual seats of the disease are behind the ears, sometimes on the hands or feet, or the private parts (seldom in the arm-pits), the breast, folds of the thighs, lower belly, the inside of the mouth or lips. In the progress of the disorder the ulcers enlarge rapidly, with remarkable fetor, a very great discharge, and livid edges. The constitutional disturbance that accompanies this disease seems principally the effect of irritation. When the vesicles burst, the child begins to grow peevish, pale, loses its appetite, and the flesh becomes remarkably flabby. Death often takes place about the tenth or twelfth day, preceded by convulsions and extreme debility. Patients are apt to relapse soon after the sores are skinned over. . . . All the patients were usually under four or five years old. It attacks the finest children in preference; the children of the poor more frequently than those of the affluent; and those who live in damp situations seem more subject to it than others."

*Prognosis.*—Rupia is commonly a tedious disease, and very chronic: it is most severe in the old, or in those whose constitution is much impaired by previous disease or irregular habits. It seldom leads to a fatal result.

*Treatment.*—In some cases an aperient is indicated at the onset; a good form to use is the following:—

Magnesiæ sulphatis ℥ij or ℥iij.

Syr. aurantii f. ℥ij.

Acid. sulph. dil. ℥x.

Aquæ ad ℥jss.

If there be much debility, a grain of sulphate of iron, or two grains of quinine may be added to the draught. When the bowels have been freely relieved, a vegetable bitter with nitro-muriatic acid should be given; in some cases the citrate of quinine and iron will be useful. The diet should be nutritious, and a moderate amount of stimulant should be allowed.

Locally, it is better to do nothing until the crusts have separated. The ulcerated surface usually needs stimulation after the crust is detached; for this purpose a lotion containing in the ounce of water from two to six grains of sulphate of copper, or a lotion composed of nitrate of silver ten to thirty grains, with ten minims of dilute nitric acid in an ounce of water. When the ulcers are on the legs, a recumbent position, with the lower limbs raised, is beneficial.

## CHAPTER XI.

### PUSTULAR DISEASES.

#### ECTHYMA.—IMPETIGO.

FARCY and Variola would be also included in this class on a strictly anatomical classification, but are more correctly placed in a separate class with the eruptive fevers. Porrigio and scabies are also placed under pustulæ by Willan.

#### ECTHYMA.

(Neligan's Atlas, Pl. VIII., Figs. 1, 2.)

*Ecthyma* is characterized by an eruption of round phlysa-cious pustules, that is, isolated pustules with a hard inflamed base, which end in brown adherent crusts, under which there is ulceration, that heals, and leaves a violet stain. This gradually fades, and becomes like the surrounding skin.

Ecthyma may be divided into acute and chronic.

*Acute Ecthyma*.—This form is commonly preceded by some febrile disturbance, loss of appetite, headache, and languor. Small rounded spots then appear on the skin, either of the neck or on the legs; these spots are accompanied by a feeling of heat and tingling; about the second day pus appears on the centre of the red spots; in from four to six days the pustule is matured, and breaks, leaving a brownish-yellow scab. The acute form of the disease is thus terminated in two or three weeks. The rash produced by the local use of tartar-emetic ointment exhibits very much the characters of acute ecthyma.

*Chronic Ecthyma* is more common than acute. It is fre-

quently met with in unhealthy infants, and was described as a distinct variety by Willan, as *ecthyma infantile*. The eruption is not preceded by febrile disturbance, and there is less local pain. The pustules occur in any part. They run a slower course than those of the acute form. In old persons the base of the pustule often assumes a dingy violet tint from a certain amount of hemorrhage, and was described by Willan as *ecthyma luridum*. In some cases the constitution suffers much, the pustules are very indolent, large, and numerous, and they may be well described as *ecthyma cachecticum*. Chronic *ecthyma*, kept up by successions of pustules, may last two, three, or four months, or even longer.

*Diagnosis.*—Chronic *ecthyma*, when the pustules are large, and elevated on more than usually prominent bases, resembles a crop of *boils*; boils, however, run a slower course, are more painful, and have a different kind of contents (the “core.”) *Ecthymatous* pustules often occur in *scabies* on the hands, feet, and nates; to recognize this disease the reader is referred to the section on that subject. *Syphilitic ecthyma* is not always easily distinguished from cachectic *ecthyma*, not of syphilitic origin. The history of the case, the color of the skin around the pustules, and the concomitant symptoms must be taken into account.

*Causes.*—It is sometimes a sequela of scarlatina or measles. It may be the result of local irritation, as from a blister, tartar-emetic ointment, or the handling of lime. Bad diet, impure air, and poverty favor the disease.

The anatomical seat of *ecthyma* is said by Gustav Simon to be between the cutis and cuticle, not in an enlarged follicle. The pustules produced by tartar emetic are often found at the mouths of hair follicles, and the central depression in them is due to the tying down of the centre of the pustule by the sheath of the upper part of the hair-sac.

In other cases the central depression or umbilication is due

to an early drying up of the cuticle at the point where the formation of the pustule begins, and so firm a union of it with the cutis that the cuticle and cutis cannot be separated at this spot by the accumulating pus. In these cases the epidermis near the central depression has usually a rather brown or yellow color.

*Treatment.*—In the acute form, a mild aperient, followed by a simple bitter, with a mineral acid and nutritious diet, are the measures indicated. In the chronic form, it is often necessary to improve the patient's diet. An aperient is sometimes indicated, and tonics are always required, preparations of iron or cinchona, with dilute mineral acids. Cod-liver oil is often of service. Warm baths, with or without gelatine, or warm sea baths, will be useful in some cases.

### IMPETIGO.

(Neligan's Atlas, Pl. VII.)

This is another pustular disease, more common than ecthyma; it is characterized by the formation of what are called *pyodracious* pustules, that is to say, small pustules causing but slight elevation of the cuticle, without much inflammation around them, and ending in a thick scab. They are often in groups, but may occur singly. They come to maturity quickly, in from twenty-four to forty-eight hours, and rapidly discharge a thick purulent matter, which dries into a thick greenish or brownish-yellow irregularly shaped crust. Pus may continue to be secreted for some time under this crust, and the duration of the disease will be thus much prolonged. The crusts are sometimes slow in separating; and when they are detached a red mark is left, which gradually wears away, not leaving a scar. Fresh pustules are formed around the parts first affected, and thus the disease may spread so as to cover an extensive surface.

Impetigo has been subdivided into a number of species.

The most important will be now described. *Impetigo figurata* is the name given to the disease when the pustules are arranged in circular or oval groups. These groups either remain distinct, or several patches become confluent. The crusts may remain attached for three or four weeks, during which the discharge continues; they then become drier, and unless fresh pustules are formed, the crusts are detached in separate pieces, leaving a reddish-brown stain.

Until the crusts begin to dry up there is usually a sense of heat and tingling. It is most common on the face, but is also seen on the limbs. In some cases of *impetigo figurata* there are at the onset severe local and constitutional symptoms; the skin becomes hot, red, and puffy; soon there can be felt a papular elevation of the skin, and in two or three days at latest, an eruption of the characteristic pustules takes place; the discharge from them is copious and acrid, so as to irritate the surrounding skin. This form of the disease has been called *impetigo erysipelatodes*, from its resemblance to erysipelas at the outset.

*Impetigo sparsa* is that form of the disease in which the pustules, instead of coming in groups, occur singly without any regular distribution. This form may appear on the legs, thighs, arms, face, or scalp.

Either of the preceding forms may become chronic, and the parts affected, especially the lower extremities, may be encased in a thick greenish-yellow scab, seated on an inflamed base; the crust, as it dries, cracks, and there oozes out a sero-purulent fluid, which dries, and adds to the thickness of the crust. This form was called by Willan and Bateman *impetigo scabida*. In the lower limbs it is most severe, is "ultimately conjoined with anasarca, and often produces severe ulceration. The incrustation sometimes extends to the fingers and toes, and destroys the nails; and the new ones are thick, notched, and irregular."

*Impetigo capitis* is often described as a distinct species. It occurs either as *impetigo sparsa* or as *impetigo figurata*. When chiefly confined to the occipital region (as pointed out by Mr. A. Squire), it is very often due to pediculi. In some children there occurs at times a secretion from the head, which is specially favorable to the propagation of these creatures. The lymphatic glands of the neck are usually swollen and tender; they sometimes suppurate. It is very usual amongst the poor to find that the glandular swelling is noticed, whilst the pustular eruption is overlooked.

Sometimes on the scalp each pustule of impetigo will be found traversed by a hair, as if the pustulation occurred in the hair follicle. This is often found to be the case in the hairs of the beard and whiskers, giving rise to a variety of the disease which is very obstinate, and may much resemble sycosis or mentagra, with which it is not unfrequently confounded. It has been called *impetigo sycosiformis*. The hairs are not usually loosened, nor is their structure affected, in this disease, as it is in the true sycosis. When impetigo attacks the face of children, it has been called *crusta lactea*.

The anatomical seat of impetigo is between the cutis and the cuticle, and in some varieties of the disease it specially affects the hair follicle. Hardy and Hebra consider eczema and impetigo as forms of the same disease.

*Diagnosis*.—*Impetigo sparsa* is known from *ecthyma* by the smaller size of the pustule, and the absence of induration around it. *Impetigo* of the head may be confounded with *favus*, of which I shall speak in a future chapter. *Impetigo* of the beard may be mistaken for *sycosis*. There is, however, no tubercular swelling around the pustules; the hairs are not loosened; and, under the microscope, the hairs present their normal appearance.

*Pustular syphilide* may resemble impetigo. The color around the pustules in syphilis are, however, coppery, and



other symptoms are present to distinguish between the two diseases. From *eczema* it is known by the thicker crust, by its beginning with pustules, and not tending to thickening of the cutis.

*Causes.*—The predisposition to the disease seems to be connected with the lymphatic temperament, and with debility; sometimes, however, it occurs in those of sanguine temperament. It is more common in children and young adults than in elderly persons. In some people the disease returns periodically in the winter or the spring. It may be caused by local irritation, as exemplified on the hands of grocers, bricklayers, and others, and on children's heads from pediculi.

*Treatment.*—At the outset an aperient should be given. If the stomach appear to be out of order, ten grains of sulphur may be given, with ten to fifteen grains of nitrate of potash, every morning for a week. Usually, however, tonics, especially quinine, will be required, and will constantly be followed by rapid recovery. Locally, poultices of bread and water, or bread and decoction of poppyheads, to remove the crusts; and when the crusts are removed, an ointment of the white precipitate, a scruple or half a drachm to an ounce of fresh lard, or the dilute citrine ointment, may be applied. (If there are pediculi on the head, their ova, popularly known as "nits," will be found attached to the hair, and may be detached by washing with spirit or vinegar, whilst the insects themselves may be killed by a mercurial ointment, by the "Persian insect powder," pyrethrum roseum, or the seeds of stavesacre in an ointment or decoction.) In some cases zinc answers better than mercurial ointment. In chronic impetigo the iodide of potassium or the bichloride of mercury is sometimes useful. In severe chronic cases of impetigo the natural sulphur waters are of service, both in-

ternally and as baths. The diet should be simple and nutritious, and alcoholic stimulants allowed in small quantity.

Impetigo is sometimes contagious, spreading to several children living together, and, by contact, from one part of a patient's skin to another. Together with ordinary isolated pyodermic pustules are often seen flattened blebs, with depressed centre and opaque contents, which soon dry up, and leave an ordinary impetiginous crust. The separate pustules may run into each other, and form a large incrustation. Its favorite sites are the face and limbs. The lymphatic glands become involved out of proportion to the inflammatory action. An attempt has been made to distinguish this from other varieties of impetigo, under the name of *porrigo*; but beyond the fact of contagion, and the occasional intermixture of blebs, something like those of *rupia simplex*, there is no character by which to distinguish it. It is doubtful upon what the contagious property depends; probably the secretion itself contains acrid ingredients, which irritate and set up similar inflammation in the parts with which they come in contact, especially in patients of similar constitution. Its contagious property is somewhat analogous to that of granular conjunctivitis. There is no reason to believe that it is connected with a parasitic growth.

The best local treatment for this variety is, after removing the scabs by oil and poultice, to apply an ointment containing about a scruple of sulphur and fifteen grains of white precipitate in an ounce of lard. The constitutional treatment is the same as in the other form.

The term *impetigo rodens* has been employed to designate more than one disease; it is ambiguous; and inasmuch as all the cases described under this name differ in all essential points from true impetigo, it is better to discard the term. For a description of one form of the disease, see *Lupus*.

## CHAPTER XII.

### HÆMORRHAGIÆ.

#### PURPURA AND SCORBUTUS.

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#### PURPURA.

(Neligan's Atlas, Pl. XIII., Figs. 1, 2, 3.)

THIS disease is characterized by an eruption of spots (called *petechiæ*) or patches (called *vimices* or *ecchymoses*), both due to hæmorrhage into the derma, varying in tint from bright red to violet. In diameter they are less than a line to more than an inch; the smallest spots are round, the larger more irregular in shape. At first the spots have an abrupt, well-defined margin; but after a time their outline is gradually lost in the surrounding skin. Their distinguishing character is that they do not disappear or fade under pressure, in this respect differing from all forms of eruption with which they could be confounded. In a few days they begin to fade and slowly disappear, becoming orange-colored and yellowish; new spots appear as old ones die away. It frequently complicates lichen, ecthyma, and other skin diseases. I have twice recently seen severe purpura complicate scabies.

Purpura has been subdivided into *P. simplex* and *P. hæmorrhagica*. The latter is only a severer form of the former in which hæmorrhage takes place, not only into the skin, but from the mucous membranes of the nose, the alimentary canal, the urinary passages, and other parts. Willan described a variety, under the name of *P. urticans*, in which

there is a reddish elevation of the skin, resembling a wheal, which subsides in few days, and leaves a livid spot on the level of the skin. It is accompanied with tingling or itching.

In mild cases of purpura, there is little or no disturbance of the general health. In severer cases, the eruption is often preceded by febrile symptoms, lassitude, and pains in the limbs. In some cases, however, without any previous constitutional disturbance, profuse hæmorrhage may occur, both into the skin and mucous membranes.

*Treatment.*—Astringents, such as gallic acid and acetate of lead, are occasionally of use. The tincture of the sesquichloride of iron and mineral acids have been useful in other cases. Turpentine, in full purgative doses, with or without castor oil, is strongly recommended by Neligan, who has found it invariably successful. Dr. Williams thinks that purpura is often connected with hepatic congestion and imperfect secretion of bile, and is best treated by remedies which tend to relieve this state.

Neither the pathology nor the ætiology of purpura is understood. It is not dependent on a want of fibrin in the blood, nor is it caused by the want of fresh vegetables, or even by poor living.

*Diagnosis.*—Some of the acute specific diseases are occasionally accompanied with petechiæ, and typhus is specially called the petechial fever, from the ordinary characters of its eruption. There are, however, in these cases other symptoms which will throw light on their real nature.

#### SCORBUTUS.

This disease, of which the English name is scurvy, formerly so common, is now but seldom met with in the Navy, in consequence of the precautions taken against it.

It has many characters in common with purpura, though

quite a distinct disease. It would not be consistent with the character of this book to enter into a detailed description of all the general symptoms of scurvy.

So far as the skin is concerned, the symptoms are much the same in the two diseases, except that in purpura the eruption is of a brighter red color. There is usually in scurvy a spongy condition of the gums, with a tendency to bleed on the least irritation; the complexion has a pale sallow hue; there are often painful swelling in the calves and thighs, with stiffness and contraction of the joints. These symptoms are not met with in purpura.

It has been proved that the cause of scurvy is the want of fresh vegetable food; and by supplying a patient with such food the disease can soon be cured. Lime or lemon juice is supplied to sailors for the purpose of preventing the occurrence of scurvy.

The eruption in both purpura and scurvy is distinguished from non-hæmorrhagic eruptions by not disappearing under the pressure of the finger.

## CHAPTER XIII.

### MACULÆ AND PIGMENTARY DISEASES.

EPHELIS.—NIGRITIS.—VITILIGOIDEA.—LEUCODERMA.—ALBINISM.—VITILIGO.

THESE morbid affections are seated in the deeper layers of the epidermis, the so-called rete mucosum. They may be classed under two heads. I. Those in which there is an excess of pigment. II. Those in which there is a deficiency of pigment.

#### I. *Affections characterized by Excess of Pigment.*

Different races of mankind exhibit very different amounts of pigment in their skin; as a general rule, the depth of color is in proportion to the heat of the climate. The normal development of the organs of reproduction, as well as some morbid states of the same organs, are often attended with an increased production of pigment; thus, at the age of puberty the skin in the neighborhood of the sexual apparatus usually becomes of a darker color; so, during pregnancy, extra pigment is deposited on the areola around the nipple. Rare cases have been described, in which at this period this discoloration has extended much further, even over the whole front of the body. During menstruation the lower eyelids are often discolored, sometimes from a sort of venous lividity, in others from real pigmentary deposit. Heat and light have the effect of increasing cutaneous pigment, either uniformly or in spots, called freckles (*ephelis*.) Yellowish-brown, round or irregular spots or patches are thus produced on exposed parts, especially in persons of fair complexion. When

spots of this kind are more permanent than usual, they are called *lentigo*, or *ephelis lentigo*. The skin on the front of the legs of old people often becomes of a brown or liver color; this change is said to depend on exposure to artificial heat. Many diseases leave the skin with an excess of pigment, especially psoriasis, eczema, and prurigo. Friction or long-continued pressure often leads to an accumulation of pigment.

Cases are on record in which mental emotions have suddenly induced an excessive formation of pigment; it is more common from this cause, however, to see in the hair which is homologous with the epidermis, a loss of pigment. The whole hairy scalp has been said to become gray in a few hours from intense anxiety or grief. Dr. Addison first called attention to a peculiar discoloration of the skin (bronzing) which he connected with disease of the supra-renal capsules. It is accompanied by progressive debility, *anæmia*, a compressible pulse, occasional giddiness, nausea, and gastric disturbance, and usually terminates fatally at the end of a few years. The color in these cases is brownish, with sometimes an olive-green tint; or it very closely resembles that seen in the darker races of man. The depth of tint varies in different patients, and is most marked in the parts most exposed, and also those in which there is normally an excess of pigment, as, for instance, around the axillæ and near the umbilicus.

The pathological connection between the cutaneous change and the supra-renal disease is not very obvious. It has been supposed by some that they are both dependent on irritation of the solar plexus of nerves, which may affect the nutrition of the capsules, and the vascular supply of the skin. It appears at any rate to be satisfactorily proved that a bronzing of the skin, accompanied by certain constitutional symptoms not traceable to any other cause, may be safely assumed as

pathognomonic of a peculiar morbid change in the supra-renal capsules. The capsule is first changed into a translucent, softish, homogeneous substance, which after a time is converted into an opaque, yellowish material; and at a later period into a putty-like matter, or a dry, chalky mass. (Guy's Hospital Reports, 3d series, vol. viii. Dr. Wilks.)

Other changes occur in the supra-renal capsules without pigmentary deposit in the skin; and, on the other hand, the skin may undergo discolorations very similar to if not identical with those accompanying Addison's disease, without the peculiar constitutional symptoms or disease of the capsules. A case is described by Dr. Parkes, in which the skin of a man, aged fifty-nine years, five months after an attack of jaundice, became gradually dark on the body, arms, and thighs, until the hue was that of the skin of a mulatto; over the abdomen, thighs, and scrotum there were, however, white patches interspersed; below the knees the skin was of its natural color. In this case the supra-renal capsules were found quite healthy; the liver was contracted, and had given rise to ascites. Other cases are also on record in the Pathological Society's Transactions (vol. xii. p. 262). Other instances have been met with in which the skin was mottled with dark and white patches; two such cases are mentioned by Dr. Addison, and considered by him to belong to the same category of supra-renal disease. In one of Dr. Addison's cases the capsules were diseased. In the other no post-mortem examination was made.

Dr. Addison thus describes the first case:—

With universal dinginess of the surface, there were, especially about the neck, hands, and arms, several well-defined patches of a deeper or somewhat chestnut-brown hue, interspersed here and there with blanched or almost dead-white portions of integument, contrasting in a very remarkable manner with both the general dinginess and deeper brown



patches; and . . . . wherever the integument presented the blanched or dead-white appearance, the hairs upon its surface were observed to have turned completely white. The general symptoms resembled what have been observed in general bronzing with supra-renal disease.

The supra-renal capsules, instead of exhibiting the ordinary appearance of combination of dark and yellow substances, seemed to consist of a firm slightly transparent reddish basis, interspersed with irregular spots of opaque yellow matter, the whole bearing a strong resemblance to an enlarged mesenteric gland, mottled with tubercular deposit.

It is doubtful whether a combination of excessive formation of pigment in one part, with deficiency in another, is in any way connected with supra-renal disease.

A boy, aged ten years, was under my care, eighteen months ago, at the Hospital for Sick Children, in whom there was a peculiar mottled condition of the skin of his trunk. The darker-colored portions were of a yellowish fawn color (very much like that seen in pityriasis versicolor); they were of irregular shape, and the margins were for the most part concave; the lighter-colored portions were some of them of a normal skin color, the others were abnormally white; these portions were round or oval, and well defined. This peculiarity of color had been observed for two years by his mother, whose attention was first attracted by a very white patch on the back of his neck, which has continued ever since.

The boy had been losing flesh and suffering from frequent attacks of fainting, with headaches. He was kept under observation for several weeks, during which his general health improved, but the skin remained in the same condition. I have lately seen him, and find that no obvious change has taken place. There was no trace of parasitic

growth in the cuticle scraped from the colored parts. I have also seen his mother's brother, who has had for many years a discoloration of his hands, and of the lower part of his abdomen; the patches are of a light-brown color, and contrast strongly with the adjacent skin. His complexion is naturally very fair, and there is not obviously any part abnormally white. He states that the brown patches always disappear from the hands in the winter, and reappear in the summer, but those on the trunk are permanent. His health has always been excellent. There is no sign of desquamation on the darker portions of skin.

Mr. Hutchinson has recently described cases similar to these under the name of *Leucoderma*, maintaining that they depend essentially on a deficiency, rather than on an excess, of pigment. In the two cases above referred to, I am quite satisfied that there is an irregular distribution of pigment, rather than a simple loss of it. It is more marked in the man's case than in that of the boy.

Several theories have been broached to account for excessive deposition of pigment in cases of supra-capsular, hepatic, and uterine disease. One is, that they depend on irritation of the sympathetic or vaso-motor nerve regulating the vascular supply of the skin; another theory is, that they depend on a morbid state of the blood, and that the pigment is a kind of excretion of carbonaceous material, which takes place either in consequence of a deficient eliminating power of some internal organ, or in consequence of mal-assimilation.

## II. *Affections characterized by Deficiency of Pigment.*

(Nehigan's Atlas, Pl. XIII., Fig. 5.)

When pigment is wanting at birth, not only in the skin, but in the hair, the iris, and the choroid, the affection is called *Albinism*; and a person in this condition is called an

*Albino.* In a single family there may be several albinos, or one member only of a family may be thus affected.

It has been observed occasionally to be transmitted by inheritance to one sex, in one family chiefly affecting males, and in another females. This condition is more frequently seen in hot than in cold climates. Albinos suffer from an intolerance of light, due to want of pigment in the choroid, and are usually characterized by want of power both in body and mind. Partial loss of pigment, or leucoderma, is said to occur more frequently amongst the darker than amongst the lighter-colored races of man; at any rate it has been oftener noticed in the former. Negroes are not very rarely "piebald" from birth. A want of pigment may depend on some previous disease of the skin, and is always met with in scars after ulceration.

*Silver-stain.*—The long-continued internal use of the salts of silver produces a peculiar livid or slate-colored tint of skin, which is permanent.

Besides the changes of color above described, there are some rare cases on record, in which a free excretion of pigment has taken place, especially on the eyelids and face; in the several instances the colors have been black, yellow, and blue. The fluid thus colored has been unctuous, hence the names *Stearrhœa nigricans*, *S. flavescens*, and *S. cœrulea*, have been introduced. The secretion may be wiped off, but appears again in a few hours. The subjects in whom these symptoms have been met with have been women, most of whom have suffered from uterine or ovarian derangement. It is questionable how many of the cases have been cases of deception; if there are real cases of such disease, it seems probable that the secretion is from the sebaceous rather than from the sweat glands.

## VITILIGO.

(Neligan's Atlas, Pl. XIII., Fig. 4.)

The term *vitiligo* was used by Willan to designate a somewhat rare disease. "It is characterized by the appearance of smooth white shining tubercles, which rise on the skin sometimes in particular parts, as about the ears, neck, and face; and sometimes over nearly the whole body, intermixed with shining papulæ. They vary much in their course and progress: in some cases they reach their full size in the space of a week (attaining the magnitude of a large wart), and then begin to subside, becoming flattened to the level of the cuticle in about ten days; in other instances they advance less rapidly, and the elevation which they acquire is less considerable; in fact they are less distinctly tubercular. But in these cases they are more permanent; and as they gradually subside to the level of the surface, they creep along in one direction, as, for example, across the face or along the limbs, checkering the whole superficies with a veal-skin appearance. All the hairs drop out where the disease passes, and never sprout again, a smooth shining surface, as if polished, being left, and the morbid whiteness remaining through life. The eruption never goes on to ulceration." I have seen a case which bore some resemblance to Willan's description of vitiligo. The patient was a woman, aged fifty-five, who had been affected two years. Her general health had not been good. She had an attack of hooping-cough just before she observed the change in her skin. The first thing noticed was great dryness of the skin; and after a time small white patches and lines were observed, having a translucent silvery appearance; the outline was irregular, and some of them seemed to be slightly depressed. They made their appearance on the chest, abdomen, the bend of the arm on its anterior aspect, and on the loins. The patches

were numerous, but small, none of them exceeding half an inch in diameter. There was no itching or tenderness in them. Another woman, aged twenty-five, presented somewhat similar changes of the skin on the neck and thighs. She had first two patches of circumscribed alopecia on the scalp, soon followed by white patches on the neck. They had to a less degree the peculiar glistening appearance noted in the first case. Some of the patches looked depressed, and others raised above the surrounding skin. No hairs could be seen on the patches. Some of them were surrounded by a margin of slightly darker-colored skin. Her general health was very good.

Celsus included under the word vitiligo three conditions, in two of which the skin was white, and in one black. In one form, which he calls *λευκη*, there was a white color, penetrating deeply into the skin, and affecting the hair. This form was very chronic, and resisted the action of remedies; it seems to have been something like the cases I have described.

The other two forms appear more nearly allied to psoriasis.

Alibert limits the term vitiligo to a simple loss of pigment, without any change of texture; and in this he has been followed by many others. This use of the term is undesirable; such an affection I would call Leucoderma.

Dr. Gull has described a set of cases to which he proposes to give the names *vitiligoidea tuberosa* and *vitiligoidea plana*. The first case was in a young woman, aged twenty-four. The eruption, which extended across the nose, and slightly affected both cheeks, consisted of shining tubercles, varying from the size of the smallest papule to that of ordinary acne. They were of a lightish color, with here and there superficial capillary veins meandering over them, giving them a faint rose-tint. The changes they underwent were very slow; whilst some advanced, others subsided.

The next case was that of a female, aged forty-two, of fair complexion and blue eyes, married, mother of eleven children, and who had been the subject of jaundice for two years. After the jaundice had lasted fourteen months, a change began in the integuments about the eyelids and in the palms of the hands and flexures of the fingers. The skin was at this time of a lemon tint. The affection of the eyelids consists of patches of a light opaque color, with the surface and edges slightly raised, extending from the middle of the upper lid inwards around the inner canthus, and then outwards along the lower lid to nearly the same extent. The disease affects both eyes almost equally. The cuticle over the affected parts is healthy, and there is no appreciable induration. The patches are more sensitive than the surrounding parts. The capillaries are slightly tortuous. The palms of the hands are of an olive-brown; along the ridges on either side of the flexures, both of the palms and fingers, there is the same opaque yellowish discoloration. The appearance is much as if the cuticle were thickened and the disease confined to it; but on a complete investigation, it is evident that here, as on the face, it is healthy, and that the morbid change is seated in the cutis, which is thickened, altered in color, and has increased sensibility. The disease remained stationary till death.

Another patient was a man aged twenty-seven years, suffering from diabetes. An eruption appeared somewhat suddenly on his arms, having an apparently lichenous character. In ten days it had extended over the arms, legs, and trunk, also over the face and into the hair. It consisted of scattered tubercles of various sizes, some as large as a small pea, together with shining colorless papules. They were most numerous on the outside and back of the forearm, as well as the elbows and knees, where they were confluent. Besides the compound character produced by the confluence

of two or three tubercles, many single ones had also, or appeared to have, a compound character, as shown by the whitish nodules upon them. Some looked as if they were beginning to suppurate, and many were not unlike ordinary molluscum, but when cut with a lancet they were found to consist of a firm tissue which on pressure gave out no fluid but blood. They were yellowish, mottled with a deep rose tint, and with small capillary veins here and there ramifying over them. They were accompanied with some irritation, hence the apices of many were rubbed and inflamed.

Another case was that of a married woman, aged thirty-three, mother of six children. She had an attack of jaundice, which she ascribed to fright. After she had been jaundiced fourteen months a change was observed in the hands, spreading across the flexures of the joints of the fingers and palms. Soon afterwards a yellowish patch appeared near the inner canthus of the eyelid, and then a precisely similar one at the same part on the opposite eyelid. The patches were very slightly raised, and not obviously indurated. In the course of some months the patches, especially about the backs of the fingers, became more and more tubercular; there were tubercles also on the right knee and on the elbows. This case showed the connection between the former cases, namely, those which presented tubercles and those which did not.

The connection of this affection with hepatic derangement is noteworthy. No treatment has been discovered to cure this malady. Some slight benefit followed the careful and repeated application of nitrate of silver.

*Linear atrophy* is a term used to designate a condition resembling the lines on the abdomen of women who have borne children. The same change has been seen after dropsy, or from contraction after any great distension. It is also shown to have existed where there has been no previous

stretching. Two cases of this kind are described by Dr. Wilks in Guy's Hospital Reports, 3d series, vol. vii. p. 297. The color is dead white, and slightly corrugated. It is soft to the touch, as if a piece of skin had been removed and the breach filled up with some soft material, or only covered with cuticle. This change in the skin usually occurs in transverse stripes of an elliptical shape, being broad in the middle and tapering at the ends. They have been usually met with on the lower limbs; less frequently on the trunk.

Circumscribed atrophy of the true skin is sometimes seen in the result of pressure, as in the case of corns, whilst the cuticle is hypertrophied.

From long-continued inflammation, atrophy sometimes occurs; this is probably due to obliteration of small vessels, or to the contraction of exuded material. There is also often seen atrophy of skin after favus.



## CHAPTER XIV.

### DISEASES OF THE SKIN DUE TO CHANGES IN SEBACEOUS FOLLICLES.

**STEARRECHA.—COMEDO.—STROPHULUS ALBIDUS.—ACNE.—MOLLUSCUM.**

THESE glands consist of small saccular recesses, from four or five to twenty, opening by a common duct usually into a hair follicle. They are most numerous where there is most hair, and especially near those localities where the skin and mucous membrane come in contact, as round the nose, mouth, and anus, also on the labia of the female, on the scrotum and at the root of the glans penis of the male. As a general rule they are largest where the hairs are finest. Several may open into one hair-sac. They are found all over the body, except on the palms of the hands and soles of the feet, on the dorsal surface of the third and often also of the second phalanges of the fingers and toes, and on the glans penis.

The secretion of these glands contains, according to Eesenbeck—

Fat . . . . .	24.2 per cent.
Osmazome and traces of oil . . . . .	12.6 “
Watery extract . . . . .	11.6 “
Albumen and casein . . . . .	24.2 “
Carbonate of lime . . . . .	2.1 “
Phosphate of lime . . . . .	20.0 “

and traces of acetate of soda and common salt.

There is frequently found in the mouth of these follicles a small animalcule which has been called *acarus folliculorum*, or *steatozoon folliculorum*. It varies in length from  $\frac{1}{10}$  to

$\frac{1}{8}$  of an inch, and is about  $\frac{1}{10}$  of an inch broad; it is found in the most healthy persons, especially near the nose, and does not appear to excite any irritation. It is divided into head, thorax, and abdomen, of which the thorax is the broadest and thickest, with eight legs, and the abdomen is the longest.

## COMEDO.

When the secretion of these sebaceous glands is retained in the follicle, either because it is thickened, or from some obstruction at its orifice, there is seen a small round black spot, which is the secretion at the mouth of the duct. By pressure between the finger-nails the contents of the follicle may be squeezed out in the form of a white cylinder with a black point, looking like a grub. In some cases the contents may become dry and quite horny. Under the microscope this is found to consist of epithelial cells and oil globules, some fine hairs, and crystals of cholesterine. These obstructed follicles are very commonly met with in young persons, especially in the face and back; less frequently in other parts. They sometimes attain the size of a pea, and a long coil of white sebaceous matter may be squeezed out of the narrow aperture. Occasionally they remain for years without change, at other times they become inflamed and give rise to acne. An obstructed uninflamed gland, with a black spot at the orifice, is a *comedo*.

*Treatment.*—These small black points may be got rid of by pressing them between the thumb-nails, or with a watch-key. The parts should then be washed with soap, and rubbed with a soft towel. General cold bathing and friction of the body should be recommended, as tending to prevent their recurrence. When the contents of the duct are very dry and horny, it may be necessary to prick the part before it can be squeezed out. When the secretion of a sebaceous

follicle is retained and the orifice is not visible, small white elevations, varying in size from a small pin's head to a pea, are produced. (See *Strophulus Albidus*.)

Atheromatous tumors, or steatomata, known to surgeons as common on the head, are hypertrophied sebaceous glands which have been obstructed.

### ACNE.

(Neligan's Atlas, Pl. VI., Figs. 3, 4, 5, 6.)

This is the name given to an affection characterized by inflammation of the sebaceous glands of an indolent character. Some derive the name from  $\alpha$ , not, and  $\kappa\iota\tau\iota\omega$ , to itch, because the disease is unattended with itching. Others derive it from  $\alpha\kappa\mu\eta$ , the height, because it is common at puberty.

The word is used somewhat differently by writers. Willan and Bateman placed it with the tuberculæ; Bielt, Cazenave, and Schedel place it with pustulæ. It may be tubercular, papular, or pustular, but it is always due to a change in or around the sebaceous follicles.

M. Hardy gives the term a wide significance, and includes under it all the affections to which the sebaceous follicles are liable, namely, comedo, milium, molluscum, and the different forms of stearrhoea, as well as inflammations of the follicles. Nearly all authors also include under the term acne that peculiar varicose dilatation of the veins of the face and nose which often accompanies the changes in the sebaceous glands met with in acne rosacea.

*Acne simplex* in its mildest form is characterized by the appearance of a number of black specks, surrounded by a narrow border of raised cuticle on the forehead and face. These specks remain for some time without inflaming (*acne punctata*), or they suppurate and discharge their contents. When they suppurate they are about the size of pins' heads,

and surrounded by a very narrow halo of redness. They run their course in four or five days, leaving a reddish stain which is slow in disappearing; whilst new follicles suppurate and go through the same phases. In some cases the pustule is larger and presents at the base a slight elevation of a red color, a kind of tubercle which lasts from a week to a fortnight after the pustule has ruptured, and may leave a slight cicatrix. This forms a transition between acne simplex and acne indurata. Acne simplex is met with on the forehead, temples, between the shoulders, and on the front of the chest.

*Acne indurata* begins by a violet red elevation of variable size, the summit of which suppurates. This pustule with an indurated base, remains stationary for several days; when it has run its course it leaves a swelling which is slow in disappearing, and which is sometimes succeeded by an indelible scar like that of smallpox. At other times there appear on the skin small purple tumors which may attain the size of a large pea. These swellings become soft and give an obscure sense of fluctuation; on section there escapes a yellowish thick creamy matter. If left to themselves they usually open spontaneously; but the contents are sometimes absorbed, and the tumors gradually disappear. Acne simplex and acne indurata generally go together on the same subject, and give rise to great disfigurement.

*Acne rosacea* is characterized by patches of variable extent, whose red or violet color presents a mottled appearance. The affected parts present also on their surface more or less desquamation, and sometimes an eruption of acne simplex. In many instances the disease begins by an attack of acne simplex, the red stains left by the pustules remaining, and enlarging so as to form the patches just described; in other cases the patches appear very gradually, extend slowly, and are accompanied by varicose dilatation of some of the minute superficial veins. The degree to which this vascular

dilatation prevails varies much in different cases; some authors consider this as the starting-point of the disease. Acne rosacea is confined to the face, and is very chronic; it occasionally disappears spontaneously. The red patches are usually free from abnormal sensations, but they may be the seat of a slight amount of itching and heat.

Another form of the disease is commonly included under the name acne rosacea; but it is more justly regarded as a distinct variety by some authors under the name of *hypertrophic acne*. In this disease the skin is thickened and rough, surmounted by red or purple elevations, and coated with a shining layer of unctuous secretion. The elevations are of varying size: fiery red or purple, sometimes attached by a broad base, at others pedunculated; irregularly scattered or confluent, so as to cover the entire portion of involved skin. They may be as large as a nut or even a walnut.

This form of the disease specially affects the nose, but it sometimes occurs on the forehead and the cheeks. It is very chronic and slow in its formation, and is never cured when it has advanced to any degree, unless by excision. It is known popularly as grog blossoms, from its being sometimes induced and favored by intemperate habits.

*Diagnosis of Acne.*—*Ecthyma* has broad flat pustules, instead of small and pointed ones, and is not interspersed with obstructed sebaceous follicles, which are to be recognized by their small black points. *Impetigo* has pustules which have no induration at the base, and are commonly confluent; they give rise on their rupture to yellow thickish crusts, which are never met with in acne. *Eczema*, in a later stage, may have some resemblance to acne rosacea, but moist secretion is notable at the earlier periods, and desquamation is more marked at a later stage; whilst eczema is not often limited to the face, and is accompanied with much burning and itching.

*Pityriasis* may resemble some forms of acne, but there is not in that disease the purple tint nor the dilated vessels seen in acne. It is by no means easy to say in all cases whether a particular case of acne is syphilitic or not. If it be syphilitic there will be very likely similar tuberculo-pustular swellings on the limbs or some other syphilitic rash, or some assistance will be afforded by the history. *Syphilitic tubercles* may resemble acne indurata. They are more prone to ulcerate, and there will be usually concomitant symptoms to aid in the diagnosis. The situation of acne, namely, the face and back, and rarely the front of the chest, will generally be of use in diagnosing it from all other affections.

*Causes.*—Acne is common in persons of lymphatic temperament, but by no means confined to them. Young children are seldom affected by acne. Acne simplex is common in youth, acne indurata and rosacea in middle age, and the hypertrophic acne in middle and advanced ages. This form is also more common in men than in women, while acne rosacea is commoner in women than in men. It is generally considered that acne is often dependent on gastro-intestinal disturbance or on disturbance of the menstrual function. This is a statement which has been handed down from one writer to another, without sufficient inquiry into the evidence in support of it. Excess of alcohol, no doubt, has an effect in increasing acne; so also has coffee in some persons. There appears to be little doubt that married life promotes the cure of acne, whilst continence rather favors the disease; masturbation is believed by many authors to be a powerful determining cause, but on this point there is want of evidence. It is by some authors said to be hereditary.

*Treatment of Acne.*—This disease has often been an opprobrium medicinæ. In young people, when the disease is of recent origin, the cure is not usually difficult. When the sebaceous follicles are constantly becoming obstructed, their

contents may be pressed out between the thumb-nails, and a lotion applied, such as two grains of corrosive sublimate, six to ten ounces of almond emulsion, with or without a drachm of dilute hydrocyanic acid. It should be used warm, and applied to the face in the morning with a sponge, after washing, and allowed to dry on. After washing it off at night, a paste may be applied to the face, consisting of one drachm of sulphur in an ounce of camphorated spirit. The unguentum sulphuris hypochloridi is often found useful.

The constitutional treatment will vary in different cases. Saline aperients are often indicated, and in many cases it will be well to combine them with iron. One drachm of sulphate of magnesia in some aromatic water, with half a grain or a grain of sulphate of iron and ten drops of dilute sulphuric acid, is often a useful form. If there be dyspepsia, this should be treated; a combination of liquor potassæ, hydrocyanic acid, and a vegetable bitter will be found of service. The nitro-muriatic acid may sometimes be substituted for the alkali. For acne indurata and rosacea mercurial aperients occasionally, and an alkaline tonic mixture may be given. After this the mineral acids may be given, or the iodide of potassium and a quarter of a grain of iodine, or the iodide of iron with sulphate of magnesia, may be given. In women the menstrual functions often require attention. In both sexes the diet should be carefully regulated; it should be nutritious, but unstimulating—plainly dressed fresh meat, well-boiled vegetables, milk, and farinaceous food. Shell-fish, pork, and raw vegetables should be avoided. Stimulants should be taken in quantities regulated by the wants of the system. Vapor baths to the affected parts are useful; and warm baths, to promote the general action to the skin, should be recommended. *Locally*, when a pustule is forming, it is useful to touch the summit with a fine brush dipped in the acid nitrate of mercury, and then apply cold water



with another brush. If the tubercular swellings are indolent, stimulant applications are required. The hypochloride of sulphur ointment, containing about ℥ij of the hypochloride to an ounce of lard, is often serviceable, or the iodide of sulphur ointment. A more active treatment is necessary in the severer forms of disease; the employment of iodide of mercury, from one and a half to seven grains in an ounce of lard, applied every night. The skin gets reddened, the cuticle cracks, and the disease at length yields. In very obstinate cases, an application of an ointment containing equal parts of the biniodide of mercury to lard has been used in a thin layer. This excites inflammation, and gives rise to crusts like those of impetigo, which soon heal, and so modify the action of the adjacent skin as to cure the disease. In the hypertrophic acne this treatment is useful. In chronic cases of acne the use of the mineral sulphur waters, internally and as baths, should be recommended.

Hebra recommends the use of soft soap to the face in acne, followed by a paste of sulphur in alcohol. He sometimes uses five grains of corrosive sublimate in an ounce of spirit, on a compress for two hours; or tincture benzoin ℥j, hydrarg. bichlor. gr. j, and aquæ ℥vj, is applied two or three times a day.

### STEARRHŒA.

(Neligan's Atlas, Pl. XII., Figs 1, 2, 3.)

There is a condition of skin in which the sebaceous follicles secrete an excess of fluid fat; it has been called *stearrhœa*, sebaceous flux, and acne sebacea. I propose to call it *stearrhœa*. This usually exists without any disturbance of health. The part of skin affected has at first a shining unctuous appearance, without any change of color. The fatty matter secreted may remain fluid, or it may congeal and form with the epidermic scales a thinner or thicker



layer of soft scales, at first white, which become darker and harder by exposure. So that we have *stearrhœa fluida* and *S. sicca*. In the dry form this layer can at first be rubbed off easily, adheres more and more closely as time advances, but always feels greasy between the fingers. It is rare to meet with this condition over the body *generally*, except in the new-born child, when it constitutes the *vernix caseosa*. It is frequent as a local condition. (1.) *On the head* (see under *Pityriasis*). (2.) *Stearrhœa* of the *face*, of the fluid variety, is not rare, but it is much more uncommon for the secretion to congeal and form a solid layer on the faces of people of ordinarily cleanly habits. It may, however, go on to such an extent as to give rise to a false *ichthyosis*, of which Bateman's eighteenth plate appears to be a drawing. It is said to occur not unfrequently as a sequel of the small-pox.

(The secretion at the root of the glans penis is of the same character as that from the sebaceous glands of the skin, and in some persons is apt to be produced in excessive quantity, so as to give rise to irritation and inflammation, unless extreme cleanliness be maintained.)

*Stearrhœa* must be treated simply and locally. The excessive secretion can be removed by the use of oil to soften the layers of scales, followed by a strongly alkaline or soft soap. To promote the contraction of the orifices of the sebaceous glands, astringent lotions should then be used, such as the bichloride of mercury, acetate of lead in the form of Goulard water or lead lotion, or sulphate of zinc. (This subject is referred to also under the head of *Ichthyosis*.)

Two other varieties of *stearrhœa* have been described.

*S. flavescens*, in which the abnormal secretion assumes a dirty yellow color. It is stated by Mr. Wilson to be most frequent on ladies' faces. The other variety is *S. nigricans*, in which the secretion assumes a dark color. The secretion

can be removed by washing, but collects again in a few hours. In a case reported in the 28th vol. of Med. Chir. Soc. Transactions, the skin was so sensitive that the young lady gave up the attempt to wash it away; each fresh effusion was preceded by pricking and burning. In that case, when the secretion in the face was arrested, the patient was seized with black vomitings, black stools, and dark urine. In another case reported by Mr. Wilson, the blackness was confined to the eyelids and sides of the nose, looking like extensive "black eyes." When the discoloration was coming on, the lady had a sensation of fulness about the eyes, indistinctness of vision, and headache. It was increased by fatigue or anxiety.

### MOLLUSCUM.

(Neligan's Atlas, Pl. XI., Figs. 5, 6.)

This affection is characterized by round elevations, varying in size from a hemp-seed to a large currant or a hazel-nut, with a dark point and a depression on the summit of each. They have a rather translucent appearance, the color of the skin over them is either normal or pinkish; occasionally there is a slight lobulation in them visible through the skin. Some of the growths have no central depression and no black point. Some have a broad base (*molluscum sessile*), whilst others have a peduncle (*molluscum pendulum*). The skin over them is usually tense; it is occasionally wrinkled. These tumors either increase slowly in size, without any other change, or they ulcerate on the surface and their contents escape, or they inflame and slough *en masse*. They have been commonly believed to be sebaceous glands hypertrophied and altered. Some of them contain a white, waxy, or semifluid material, and a cyst which, in some cases, consists of several sacculi opening into a common cavity. Under the microscope are seen oil-globules and epidermal

cells filled with granular matter. Others are more fibrous in structure. Dr. Beale (Path. Soc. Trans., vol. vi. p. 313) considers molluscum due to an alteration of the structures concerned in the formation of the hair, especially of the cells at the bottom of the follicle, and of the follicle itself, with hypertrophy of the subcutaneous areolar tissue. G. Simon (Die Hautkrankheiten, Berlin, 1851, pp. 235 and 354) describes two forms of the disease: one, which he calls molluscum simplex, he describes as due to an extra formation of connective tissue, without any change in the hair follicles or sebaceous glands; and the other, which he calls molluscum contagiosum, he regards as due to hypertrophy of the sebaceous glands.

It seems probable that there are two distinct diseases (both called molluscum) which present very similar naked-eye appearances, but are anatomically quite different.

Bateman, Cazenave, and others, used the term *molluscum contagiosum*, but most recent observers do not believe in the contagious character, and drop the epithet "contagiosum." M. Hardy states that he had not believed in the contagiousness of the disease till within the last few years, during which he has seen instances of what seemed to be evidence that it could be thus propagated. M. Hardy thinks that this property is to be explained by the presence of branched tubes containing the spores of a cryptogamic plant, which he believes are constantly to be found in the tumors of molluscum. M. Hardy states that a M. Caillaux, having had two or three patients suffering from molluscum, observed at the end of a few weeks that the eruption had spread from bed to bed to thirty patients. M. Hardy, however, doubted the contagious property of the disease until 1858, when he observed a nurse who had on her breast four or five tumors of molluscum, and the infant she was suckling presented analogous growths on the parts of the face which came in

contact with the affected breast. Again, he had in his wards a patient suffering from molluscum in a severe form, and after a fortnight one of the attendants had the same disease on the back of her hand, and it was soon disseminated over her body, whilst another servant who had less communication with the patient, but was in the habit of allowing her head to be combed by her, presented similar scattered growths on her neck. Hebra, on the other hand, has tried to propagate molluscum by rubbing the contents of the tubercles on sound skin, but without any result.

Four cases are described by Dr. Henderson, three of which were in children of one family, and the fourth in a child who was in the habit of associating with them.

The question of contagion must, I think, be held to be undecided.

The usual seats of molluscum are the trunk (either back or front), the neck, face, and the scrotum. It is not attended with any constitutional disturbance. It may exist at any age, but is most commonly met with in children.

*Treatment.*—This is purely local. The tumors may be laid open, and the interior rubbed with lunar caustic. If attached by a pedicle they should be snipped off and the base cauterized.

## CHAPTER XV.

### HYPERTROPHIES AND DEGENERATIONS.

LUPUS.—TRUE LEPROSY.—NGERENGERE OF NEW ZEALAND.—BUCNEMIA.—FRAMBESIA.—KELOID.—SCLEREMA AND SCLEROSIS.—PACHYDERMATOCELE.—WARTS.—HORNS.—CORNS.—NÆVI.

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### LUPUS.

(Neligan's Atlas, Pl. XIV., Figs. 2, 3, 4, 5.)

*Lupus*, as defined by Willan, was a tubercular disease commonly attended with ulceration; Cazenave included under the same name a disease not leading to ulceration, and without tubercles. I therefore describe two forms, *lupus vulgaris* and *lupus erythematosus*. Both forms of the disease involve the derma, cause interstitial absorption and atrophy of that tissue, and are both followed by a scar. They are distinguished also by running a chronic course, and are specially prone to attack the skin of the face. They have also a peculiar deep violet or dull red color.

I. *Lupus vulgaris*.—The beginning of the disease is marked by brownish-red tolerably firm eminences of the skin of varying size, the average being that of a millet-seed. Occasionally the disease begins on the nasal mucous membrane. The elevations of the skin are soon covered with a smooth transparent cuticle or a white scale; they enlarge in diameter and in height, and become merged into adjoining tubercles. They thus attain the size of beans, or assume the form of raised flattened patches of some extent. More rarely the tubercles attain the size of large nuts (*lupus hypertrophicus*);

these larger growths assume a more or less cedematous appearance from infiltration of the subcutaneous tissue. The nose is sometimes enlarged to twice its natural size by the disease. The tubercles frequently continue many months without change; in other cases they advance in size, and new papules or tubercles spring up. The new growths are commonly fused into the parts previously affected. On the other hand, after an uncertain period the parts first attacked, instead of advancing, undergo retrograde metamorphosis in one of two ways. (1.) *Lupus non-exedens*.—The tubercles or patches become flattened, with or without an extra formation of epidermic scales on the surface. (2.) The morbid structures ulcerate. When the ulceration is deep the term *lupus exedens* is used. The ulceration commences in the middle of each patch, and small crusts, at first isolated but soon running into each other, are formed. In this way a large surface is covered with dark crusts that speedily dry and crumble; the crusts are very adherent, and consist of pus, blood, and sebaceous matter; instead of being rough and dark-colored, they are sometimes smooth and yellow. In some cases they are undermined with fluid, instead of being firmly adherent. On the removal of the crusts, there are seen either granulations, simple excoriations, or deep ulcerations. The granulations vary in size from that of small pins' heads to that of nuts; their color is brownish-red. The excoriations vary in diameter from one-sixth of an inch to several inches, having an oval or angular outline. When there is ulceration, the ulcers are concave, with grayish-red or yellow exudation, having margins either everted or slightly undermined.

Ulceration often destroys not only the skin but also the ligaments and cartilages; in this way the nose and the eyelids disappear, and the most hideous deformities result. The lower lid may be destroyed, so that the skin of the cheek is

continuous with the ocular conjunctiva; the eye becomes the seat of chronic inflammation, the conjunctiva is thickened, the cornea becomes opaque, and blindness ensues. When the eyelid is not entirely destroyed small ulcers are often formed, and by their cicatrization eversion of the lid is caused. Erysipelas not very unfrequently complicates lupus, especially under the influence of stimulant or caustic applications, and often tends to arrest the progress of the disease. Under other circumstances the process of destruction after an uncertain period stops short; exudation on the ulcerated surface becomes more scanty and more consistent; cicatrization begins at the circumference and extends towards the centre until the surface is covered with a thin glistening layer of epidermis which allows the red corium to be seen beneath it. By degrees the spot becomes paler, and a cicatrix is left either smooth, or beset with elevations radiating from one point, or with cedematous-looking trabeculæ. The scars after several years lose their red color, become white, and cause deformities varying according to their situation. In one case there is eversion of the lower eyelids; in another, eversion of the lips, and in another, drawing down of the point of the nose. In other instances, contraction of the skin of the neck takes place, so as to prevent free movement of the head, or false ankylosis of the joints is induced. Whilst cicatrization is going on at one part, fresh papules and tubercles are developed at another.

When the disease spreads in circles or segments of circles it is called *serpiginous*.

When ulceration extends to the deeper tissues the term lupus exedens is used; when the ravages of the disease are limited to the surface it is called lupus non-exedens. Lupus exedens sometimes begins on the mucous membrane of the nostril, which gets swollen and red, and emits an offensive discharge. The ala or the upper lip swells and becomes of

a dark red color, and then ulceration ensues, with the formation of crusts. The case then proceeds just as in the cases commencing on the skin.

The progress of this malady is as a rule attended with very little pain, but with occasional itching. In the most severe cases of lupus exedens, when it extends its ravages very deeply, the patients are liable to chronic gastro-enteritis and often die in a state of low fever with colliquative diarrhoea. The course of the disease is very chronic, lasting ten, twenty, or thirty years or more. In some cases its course of destruction is very rapid. The usual termination is in cicatrization; there is a great tendency to relapse and renewal from time to time. Biett considered that a relapse may be expected when the cicatrices remain soft, bluish, and surrounded by soft tubercles, or if after cicatrization the tuberculous swellings do not disappear.

The favorite seat of lupus is the face, but it occurs also on the trunk, on the genital organs, and more rarely on the limbs.

The tubercles in lupus are commonly grouped together to the number of ten or twelve, forming crescentic patches, or taking an irregular form. Sometimes the non-ulcerating lupus occurs scattered over the body, in the form of single or small groups of tubercles; this form is called by the French "*scrofulide tuberculeuse disséminée*."

Anatomically, lupus appears to consist of a new formation of connective tissue in the corium accompanied with some injection of vessels and a transparent blastema. In some cases small white corpuscles have been seen which looked like dilated hair-sacs or sebaceous follicles. By the extension of this tissue atrophy of the hair follicles, sebaceous glands, and papillæ result. According to Wedl this connective tissue may extend into the adipose and muscular tissues, and run into the bones. The pus which subsequently ap-



pears is, he says, a new formation from the *blastema*, and not produced by disintegration of the newly-formed connective tissue or of the healthy structures.

*Causes.*—Very little is known on this point. The disease is regarded by most authors as due to a diathesis closely allied to, if not identical with, *scrofula*. Many persons attacked by it are in apparently perfect health, but many are of a phlegmatic temperament with flabby muscles and languid circulation. It is slightly more frequent in women than in men, and more common in youths and young adults than in persons above the age of forty years.

*Treatment.*—Cod-liver oil is often of great service; it should be given in moderately large doses, such as two or three teaspoonfuls three times a day. The diet should be azotized and nutritious. Stimulants allowed in moderation; and pure air should be obtained if possible, as well as all other hygienic conditions attended to. Occasional doses of mercurial aperients will be found of service. If the patient is anæmic, the iodide of iron may be given with the cod-liver oil. A course of arsenic will sometimes prove of great service in *lupus exedens*. Locally, Dupuytren's powder, consisting of calomel ninety parts, with from one to ten parts of arsenious acid applied in the form of a paste with a little mucilage; when the slough caused by this separates, the surface is often found to present a more healthy appearance and to heal more rapidly. When ulceration is proceeding rapidly, stronger caustics, such as the chloride of zinc or chloride of antimony made into paste, will be more suitable. The acid nitrate of mercury is preferred by some. Vienna paste is a very effectual caustic, but requires to be used cautiously, from the depth to which it exerts its effect.

Professor Hardy recommends an ointment consisting of equal parts of the biniodide of mercury and lard, which should be warmed at the time of its being applied. It causes pain

for some hours, a yellowish or brown crust like that of impetigo is formed, and there is considerable swelling around. When the crust falls at the end of a week or fortnight a great improvement is seen in the affected parts; the tubercles are less elevated, or the ulceration is contracted and disposed to heal.

The iodide of starch, made into a paste, is a preparation much used by Mr. Marshall, and is a very useful application, almost unaccompanied with pain.

It will not always be necessary to resort to local applications, but they usually aid in advancing the progress of the cases. It will be well to commence the constitutional treatment alone if the disease is not rapidly extending, and to use local means after a few weeks of internal treatment if the progress is not satisfactory.

II. *Erythematous Lupus*.—This superficial variety of lupus begins as deep red or violet-colored well-defined slightly-elevated spots or patches. The surface is smooth, and presents a peculiar glistening aspect. The redness disappears for the moment on pressure, and is increased by exciting causes of any kind. In shape the patches are round or oval, and they vary in size from a fourpenny piece to a shilling at first; they frequently extend until they cover one cheek, or nearly the whole face. The cuticle on these affected parts after a short time is partially detached, and small branny scales cover the surface, which are not readily rubbed off. This form of the disorder runs a very slow course; extending slowly, then remaining stationary, or healing. Cicatrization usually takes place from the centre, hence the disease was called by Bielt *centrifugal erythema*.

In some cases, instead of the patches being covered with scales, there are seen a number of rough points, which are found on close examination to be the orifices of sebaceous glands plugged with hardened secretion. The parts that are

healing become smooth, the redness is diminished, until at length it quite disappears, and a pale smooth scar is left, more or less distinct. This form of disease is commonly confined to the face, but has been seen on the limbs. It is more frequent in females than males.

*Treatment.*—The constitutional treatment is the same as in the graver forms of lupus. As local applications, the tincture of iodine, or carbolic acid and glycerine in equal proportions, will be found useful.

*Diagnosis.*—Some forms of *acne* simulate lupus at an early stage. Lupus, however, is never limited to the sebaceous glands, has its own peculiar color, and is followed by a characteristic scar. Its course, too, is extremely slow. *Tubercular syphilide* closely resembles ordinary lupus. It has, however, harder, rounder tubercles, with a coppery tint, less disposed to desquamate. If ulceration occurs, it is commonly more rapid, and the ulcers have sharply-cut, well-defined borders, and a gray floor, and a greenish crust, whilst the ulcers of lupus are of a darker and more violet color, and their edges are not bound down nor sharply cut, and the crust is black. The syphilitic ulceration does not occur to the same depth as in some of the lupoid ulcers. The syphilitic tubercles are usually arranged in a circular or crescentic form.

*Cancer of the skin* usually occurs at a more advanced age, and is attended by induration and acute pain. Before ulceration it presents no resemblance to lupus; after ulceration the cancer is distinguished by the absence of crusts, by the form of its borders, and the presence of an inflammatory areola; it often attacks bone, which lupus generally avoids. Its favorite seat is the lower lip.

A form of disease described as "*noli me tangere*," or *rodent ulcer*, presents some affinity to lupus, between which and cancer it seems to form a bond of connection. A single

small dark masses in the skin of the face or other parts, and covered with a crusty scale. It is supposed to signify suppuration, and is never accompanied by tenderness.

It is described by M. Fournier as a spot with dark shining edges, nearly circular, of some part of the size of the finger nail, and of the color of several of many years duration. It rises between the eyebrows, or on the nose or cheek, and is not painful, and without any other change. It has no tendency to enlarge, and is sometimes found: seldom before the age of thirty-five, or forty years. Rodent ulcer is more common between fifty and sixty years, and does not often occur before the age of thirty-five.

It may begin as a small papule which becomes nodular, or as a scaly spot, or as a small dark flat tubercle. It is usually single: situated on the face, but becoming irregular in shape, extent, and depth. The surface of the base is smooth, and reddish-yellow, looking half dry and glazed.

The structure consists of firm tissue in which numerous nucleated exudation-cells are imbedded. It extends no joint on section.

The ulceration is characterized by the absence of granulations, an indurated edge, and a tendency to spread to adjacent structures without regard to difference of tissue.

M. Hardy classes together all the varieties of lupus under the head of Scrofulides, giving the names—1. Scrofulide erythémateuse. 2. S. cornée, or acnéique. 3. S. pustuleuse. 4. S. tuberculeuse, superficial or with ulceration. 5. S. phlegmoneuse. The last form is a common strumous inflammation of the skin, leading to suppuration.

These affections all possess certain common characters. In the first place they involve the derma, and often the deeper layers. They are usually circumscribed to one region, not having much tendency to become general. They have a special color, a deep red or violet, less brown than that of

syphilides, and less red than that of other exanthema. The *ulcers* have irregular "eaten" margins, not sharply cut, nor adherent to the parts beneath; the floor is fungoid, bleeding, or covered with pale, soft, sometimes exuberant granulations. The *crusts* are sometimes thick; they are not very hard; they are blackish when they contain fluid, or white when free from blood. Cicatrices constantly follow the *scrofulides*; they are usually depressed, and have a reticulated aspect; sometimes they are prominent, uneven, and granulated, like warts, or very exuberant, forming a variety of "keloid." Their color, at first violet, gradually fades and becomes white.

Hardy describes under the name of *pustular scrofulide* an affection allied to lupus, which has been called by some writers *impetigo rodens*. It begins in two different ways. In some cases a number of small pustules of the size of pins' heads are seen on a red patch of the size of a shilling; they last a week or a fortnight, rupture, and yellowish crusts are formed by the drying of their contents. In other cases the disease begins by a single pustule of the size of a pea, distended with a mixture of blood and pus, which is followed by a blackish crust. Once formed, the disease is characterized by dark-colored, yellowish, or even white crusts. There may be one or several patches covered with crusts; where there are several they often run into each other. The crusts are very adherent; when they are removed a superficial ulcer is found, with irregular edges, and a pale red floor, often covered with soft granulations. In some cases the granulations are dry, hard, and resemble warts, hence the name "*scrofulide verruqueuse*." This warty appearance is never a primary one, according to Hardy, but is always secondary to ulceration consequent upon a tubercular or pustular lupus. The common site for this disease is the nose; it is seen also on the cheeks. The progress of the disease is

Dr. Simpson, in an interesting paper in the "Edinburgh Medical and Surgical Journal" for 1841, has shown that there were leper hospitals all over Scotland and in many parts of England. He gives a list of no fewer than one hundred and ten such hospitals of which he found records. By him it has been maintained that the leprosy of the middle ages was introduced from the East by those who returned from the Crusades. It is certain, however, that it existed in France

Britain before the time of the Crusades. In the tenth century a law was passed enacting that a married female was entitled to separation and the restitution of her goods provided her husband was affected with leprosy. This proves that the disease was far from uncommon at this period.

Its existence in England can be proved as late as the end of the seventeenth century, and it continued to be met with in the northern islands of Scotland to a much later period.

Aretæus and Aëtius described the disease under the name "elephantiasis." The Arabian writers applied the corresponding term ("das fil") elephant disease to a disease unknown apparently to the Greek physicians, viz., the Barba-does leg, or bucnemia of modern pathologists; at the same time they described the Greek elephantiasis under other names—"judam," or "juzam." The confusion thus produced was increased by the errors of the Latin translators of Avicenna, Rhazes and other Arabic writers. These translators rendered *das fil* the elephant disease of the Arabic by *elephantiasis*, and translated the term juzam (which really denoted the elephantiasis of the Greeks) by the word *lepra*, a term used by the Greeks for different forms of scaly eruption. From this time through the middle ages the term *lepra* was usually employed in describing the elephantiasis of the Greeks. By some writers the epithet "*lepra Arabum*" was given to distinguish it from "*lepra Græcorum*," the original scaly disease of early Greek writers; and in later times it has been called "*lepra tuberculosa*."

There appears reason to believe that in the sixteenth century cases of syphilis and other skin diseases were confounded with leprosy, and isolated in the leper hospitals.

The synonyms of leprosy are elephantiasis of the Greeks; *lepra* of the Arabs, or *lepra tuberculosa*: *spedalskhed* of Norway; *mal de St. Lazare*, *maladie de Crimée*; *lepra Tau-*

rica, or de Chersonèse.<sup>1</sup> The leprosy of the Bible was probably the same disease.

*Elephantiasis of the Greeks* is a disease now but rarely met with in Great Britain, though it still prevails in India, Africa, Greece, Spain, Norway, and Iceland. It is a general disease of nutrition, the chief morbid changes making themselves apparent in the nerves, skin, and mucous membranes. It has been divided into two varieties: the one characterized mainly by an albuminous exudation into and under the skin and mucous membranes; the other characterized by exudation in the nervous structures, producing anaesthesia and atrophy. Both varieties are sometimes ushered in by lassitude, drowsiness, slight shivering, oppression at the epigastrium, and nausea. These prodromata (in some cases very ill-defined) last for a period varying from several weeks to many months. In the first form (which has been called *elephantiasis tuberculosa*), after the premonitory symptoms have lasted some time, an eruption appears, consisting of yellow, crimson, or deep brown, hard spots, slightly elevated, varying in size from that of a small pin's head to that of the palm of the hand; the spots are round or irregular in form. According to most writers the skin at those points partially loses its sensibility from the first. After a time the spots fade and disappear; subsequently they reappear on other parts, of a deeper color, and become more or less confluent. The eruption usually again slowly disappears, shortly to return; and this alternation occurs several times, until at length the spots become permanent. The part on which they are most commonly persistent is the face, afterwards the backs of the hands are attacked, and then the body generally. The smaller spots become thickened and changed into smooth

<sup>1</sup>MM. Danielssen and Boeck state that radesyge has been improperly confounded with spedalskhed, but that it is a different disease, more nearly resembling the sibbens of Scotland (frambœsia).



shining tubercles, which remain isolated or run together. The tubercles increase in size, and are often separated by deep furrows; the epidermis is usually but little affected, but the true skin and subcutaneous areolar tissues are infiltrated; hairs on the affected parts become white and fall out. In addition to the tubercles there are sometimes livid spots and patches on other parts. Darting pains are often felt in the limbs, and the lymphatic glands are frequently swollen; the tubercles themselves are not painful, but, on the contrary, sensibility is diminished in them. After an uncertain period the mucous membranes are involved; on the tongue and mouth spots and patches appear, which often bleed and grow into tubercles; the bronchi also suffer, and dyspnoea with fetid breath is induced. At length the exudation both on the skin and mucous membrane softens, and ulcerations covered by grayish-brown crusts are produced. The eyes are subsequently attacked and often destroyed; taste and hearing may also be lost. The severity of the constitutional symptoms is commonly in proportion to the extent of the local disease; except in the slightest cases, there is prostration, with a small infrequent pulse and disturbed digestion. In the earlier period of acute cases there may be a quick full pulse and other signs of fever. The urine is sometimes albuminous and deficient in urea. After lasting usually for many years, diarrhoea often hastens the fatal termination. It has been stated by some writers that the sexual passion is increased; but this, if correct, is probably true only of the earlier stages. Dr. Webster states that the spirits are usually good. The disease has been known to run an acute course; but this is a rare occurrence.

Sometimes the tubercles disappear by absorption, leaving behind them cicatrices and furrows; at others they are removed by ulceration, and the scars then formed are hard,

white, and irregular. In Norway the "Norwegian scabies" sometimes complicates elephantiasis or *spedalskhed*.

The second form, *E. anæsthetica*, is more uncommon in central Europe than the other, though tolerably frequent in Norway and in India. The mode of attack is generally more insidious; at the onset it is rarer to meet with febrile excitement, and there is more depression of spirits. The first local symptom is an appearance of large bullæ seated on livid patches; these either arise spontaneously or from a slight local irritation; the bullæ break and ulcers are left; crusts are formed on the ulcers, which subsequently heal. Fresh bullæ arise elsewhere, and run the same course. After a variable period a fresh order of very distinctive symptoms occurs; white patches appear irregularly over the body, accompanied by itching: the sensibility of those parts is diminished, and there is slight desquamation. These patches are not always met with; they constitute what has been described by the ancients as "*morphæa alba*," the "white leprosy" of many writers. Hyperæsthësia follows, and periodic shiverings; after a time anæsthesia sets in and becomes extreme, sometimes extending over the whole body. The parts affected are dry, whilst other parts perspire as usual. The conjunctivæ are injected and vesicles are formed over them; the lids then become atrophied, the lashes fall out, the conjunctivæ assume a dull, dry and pale aspect. In rare cases penetrating ulcers are formed on the corneæ. The nasal mucous membrane becomes dry, ulcers form and destroy the septum. Paralysis ensues in many of the muscles. A very singular symptom is described by MM. Danielssen and Boeck as occasionally occurring in the later stages: a spot, usually on the sole of the foot, becomes bluish; after some days fluctuation is felt, the skin sloughs, and a deep ulcer is formed, which seldom heals. It is stated that if the ulcer heals rapidly, death ensues; and if the ulcer appears disposed to

heal, the patient suffers much constitutional disturbance. In this variety the ulceration seems to commence in the subcutaneous tissue and in the true skin. When anæsthesia is complete, the bones suffer; violent pains occur in them; livid swellings encircle a finger or a toe; ulcers are formed, and fingers and toes drop off. Sinuous ulcerations form, and carious bone is detached. Before death diarrhoea commonly occurs, and sometimes tetanic spasms. During the course of the disease there is great thirst, moderate appetite, occasionally vomiting and pyrosis, a feeling of cold, with torpor and drowsiness. There is sometimes anasarca, and in these cases the urine is albuminous.

Both forms of the disease occur most frequently from the age of ten or twelve to twenty or thirty years, but may be met with at any period from infancy to old age: both sexes are liable, but males more so than females. There is strong evidence in favor of the hereditary transmission of the disease, but it is considered by the most recent authorities not to be contagious. It is endemic in many localities, and is most common amongst those who are badly housed and fed. There has been a decided increase of the disease of late years on the western coast of Norway, and this increase is dependent in some way on the mode of living adopted by those engaged in the fisheries. It is very generally more severe near the seacoast than inland (*Med.-Chirurg. Review*, April, 1858).

The circumstance that leprosy was becoming rare towards the end of the sixteenth century, whilst constitutional syphilis was on the increase at this time and had not been recognized till near the beginning of the same century, has led to the theory that leprosy was replaced by syphilis, or that syphilis was a modification of leprosy. It was also generally believed in the middle ages that leprosy was communicable by sexual intercourse. This theory is found to be quite un-

tenable on careful inquiry. The history of the case recorded below shows that the cutaneous affections in the two diseases present some points of resemblance. The peculiar nervous phenomena in leprosy are, however, quite unlike anything met with in syphilis, and the course of the tubercles in cases where exudation into the skin is a prominent symptom is different from that seen in tubercular syphilides.

*Morbid Anatomy.*—When a piece of skin is examined after death, it is found more or less thickened; on section it is firm, has a brown or red color, and exudes on pressure a viscid and bloody fluid. Newly-formed tubercles are made up of a delicate fibrous network, in the meshes of which lie a number of adherent whitish granules, not easily separated by washing; acetic acid renders the fibrils transparent, but increases the opacity of the granules. A little fat, some fibres traversing the mass without any special network arrangement, and some deformed blood-globules, are the only other microscopical elements. The neighboring skin is healthy, but the sebaceous follicles are enlarged. When the tubercles are more advanced and the color browner, the fibres and granules have disappeared; a great number of cells can be seen, which are larger than so-called exudation-corpuses, are oblong in shape, and contain a large nucleus which almost fills the entire cell; the space between the nucleus and the cell-wall resembles a shining ring; the nucleus is of a gray color, and incloses seven or eight well-marked brown granules. In this stage the texture of the vessels and nerves is destroyed; the sweat glands have disappeared, their excretory canals only remaining in the epidermis; the hair follicles are in part destroyed; the sebaceous follicles are enlarged. When the tuberculous matter has still further advanced and has softened, there is seen only an amorphous mass and remnants of cells and nucleus. Such is the description given by *Dantelmann* and *Boeck*. *Gustav Simon* examined the head

and face of a man who died in Berlin with well-marked elephantiasis. On section of the tubercles, the epidermis was not thickened, but softer than usual; underneath were two layers, the outer of which was one to three lines thick, yellow, and rather soft; the inner was thicker (about half an inch), finer, of a more transparent yellowish-gray color, and it formed the centre of the tubercles. The outer layer was composed of round corpuscles, with one or more inclosed granules; they lay in fine meshes of fibrous tissue, which were not abundant; the inner layer was composed almost entirely of bundles of fibres, in which were here and there yellow masses of the size of millet-seeds, inclosing corpuscles similar to those in the outer layer; the hair sacs were enlarged; and what looked like sebaceous glands could also be seen, but as the preparation had been in spirit, this was not certain. Immediately under the epidermis, in the outer layer, were clear streaks which were not tubes of sweat glands, or if so, they were two or three times as thick as usual. Simon concludes that in elephantiasis there is hypertrophy of the skin, enlargement of the hair sacs, sweat and sebaceous follicles, and formation of little round corpuscles, deposited chiefly at that part of the tubercle immediately under the cuticle.

Chemically, the exuded material contained fibrin, a large quantity of albumen, fat, and salts. After softening there was less fibrin, and it was alkaline in reaction; before softening, it was neutral to test-paper.

In the anæsthetic variety there is atrophy of the skin, and exudation into different parts of the nervous system of a transparent albuminous material.

MM. Danielssen and Boeck state that the exudation extends to the spinal cord, almost covering it, especially posteriorly; the arachnoid and pia mater become glued together, and the substance of the cord gets injected and very hard. The exu-

dation sometimes extends to the roots of the nerves within the vertebral canal, whilst the axillary and sciatic plexuses are sometimes atrophied. Similar changes are described as having been met with to a less degree in the cerebral pia mater and arachnoid, and the Gasserian ganglion has been atrophied.

The mucous membranes present various appearances. At first there is slight thickening of the basement membrane, from which the epithelium has been detached; then the thickening increases, the mass is less firm than in the skin, and has a yellowish-white color on section. At a later date the deposit softens, ulcers are formed, and cicatrices causing contractions of the palate, larynx, or oesophagus may follow.

In the intestinal mucous membrane, ulcers of the same kind are found. The pleura and pericardium are also the seats of tubercles, which soften and form superficial ulcers.

The liver, spleen, and kidneys are also liable to be infiltrated with a morbid material, which undergoes softening.

The preceding description is mainly based on that given by MM. Danielssen and Boeck. The account given by Dr. Carter, of Bombay, differs from this in several important particulars. He has never found disease in the brain or spinal cord and their membranes (except once a few fibro-osseous particles in the arachnoid); the roots of the spinal nerves he has also found healthy. The nerve trunks distributed to the affected parts have always been found diseased; they were enlarged, mottled, or streaked, and firm, though supple; the neurilemma was free from opacity or adhesion. The morbid changes were seated in the funiculi of the nerves, the nerve-tubercles being separated and compressed by the development of a clear nucleated tissue amongst them, and eventually being wholly destroyed.

He distinguishes several varieties in the cutaneous eruption. One, which he considers typical, consists of circular

patches, varying in diameter from three-quarters of an inch to three or four inches, having raised edges, wrinkled but free from scales, of a pink color, with depressed centre, which is pale, dry, and glistening. The patches have a tendency to spread and unite with others adjoining. The affected parts are more or less insensible; the hairs are few and atrophied, but seldom blanched; the functions of the glands of the skin are suspended or diminished. After a time the edges subside, and a pale, dry surface is left. In the centre of the patches a dotted appearance is seen, owing to clogged and projecting hair follicles, the hairs being stunted or broken.

Another appearance often presented is a light discolored state of irregular-shaped patches of skin, in which the loss of color is almost the only change; the border of the patch is sometimes indicated by a narrow, level, reddish line. This is probably an advanced stage of the eruption first described.

Another form is where the central part of a patch has nearly the color of sound skin, but is insensible, whilst the margin is denoted by a level light-colored streak.

Dr. Carter has not met with hyperæsthesia at any period of this disease.

*Treatment.*—In the way of prophylaxis, leprous persons should not be allowed to marry. A nutritious diet, bracing dry air, and other hygienic conditions should be observed.

In the way of cure, drugs seem to be of little service. Mercury, arsenic, and iodine have severally been tried without benefit. *Hydrocotyle Asiatica* has been said by some to do good, whilst others state that iodide and bromide of potassium have been serviceable.

Tonics, and attention to hygiene, such as good diet, bathing, pure air, cheerful society, and occupation, are the only means which have been found efficacious in retarding the progress of the disease.

The disease is occasionally seen in this country, either in

natives of those places where it is still endemic, or in persons who have lived in those countries for a considerable period. There are several models of the disease in the Guy's Hospital Museum, taken from patients who were treated in that hospital. One is the case of an Irishman who had never been out of Great Britain. Mr. Hutchinson has recently reported several cases which he has himself seen, or had reports of, in London. (London Hospital Clinical Reports.) The following case was under my care recently in University College Hospital. A portrait of the man and a model of his arm are to be seen in the University College Museum.

#### CASE.

J. Fitzgibbon, aged fifty-eight years, a native of Limerick, in Ireland. His father and grandfather were very strong men, and lived to a good old age. He knows nothing of the rest of his family. He spent seventeen years in India as an engineer; he came home two years ago. Whilst in India he lived usually at Bombay, in very damp quarters. He always had enough to eat; at one period of his life drank freely.

His general health had been very good till lately. About eighteen years ago he had venereal disease, for which he was treated with pills which made his mouth sore. There is still a depressed scar on the glans penis, not indurated; he says this has been there eighteen years. Since his return from India an eruption has appeared on his skin. He first observed on his arms, legs, and thighs pimples of the size of pin-heads, nearly of the normal skin color. There was no itching or unusual sensation in them. Since then they have increased in number and size. He states that he has lately felt very low-spirited and unusually weak. Has lost all sexual desire for twelve months.

When admitted to University College Hospital, in May, 1846, under my care, the following notes were taken of his



condition: A very strongly-built man, much disfigured by an eruption on his face and elsewhere. His eyes are suffused; his voice hoarse. Pulse between eighty and ninety, weak.

His face is studded with numerous round, hard elevations, varying in size from pins' heads to large peas, either of the skin color or paler. They are to be seen on the forehead, cheeks, chin, nose, and ears. A few of the tubercular swellings are soft and fluctuating, and on section a purulent fluid escapes. The harder ones have a solid, opaque, white section. The eyelids are thickened and knobby; there is no hair on the outer half of either eyebrow. Attention has been specially called to this, as a characteristic symptom of leprosy as seen in Madagascar by Dr. Davidson. There are also on the face several crusts of a darkish gray or brown color, something like rupial scabs; beneath the crust a sharply-cut circular ulcer is found. The sclerotics have a muddy aspect, and the conjunctivæ are injected. There is but little hair on his head, and the scalp has a peculiar olive-brown discoloration in patches, which are elevated, and present in some cases a little desquamation. The external ears are hypertrophied and knobby, with a little scabbing. On the thorax are twenty or thirty tubercles similar to those on the face, but less prominent, as well as one or two crusts. The skin of the abdomen is mottled, of a brownish color. On the thighs are also tubercles and numerous crusts, which leave a round, unhealthy-looking ulcer when removed. On the arms there are patches of brown discoloration, and the skin feels generally thickened and studded with tubercles, mostly of the color of the skin, but some of a livid purple tint. The backs of the hands are like the arms, but more livid, and have many crusts. A few of the tubercles have softened, and contain unhealthy sanious pus. The palms of the hands are very dry, but not peeling or tubercular. At the nape are

character of the disease which we must consider, and to the fact that the disease is not more frequent in the tropics than in the temperate zone.

The case was not really unusual. It was thought that possibly it might be a syphilitic infection, or a local infection in a chronic disease. It was accordingly treated with mercurial vapor baths twice a week, and five grains of iodine pills every night. It was soon becoming subsided under the treatment. It seemed, however, that he felt much stronger, and it was thought that he had done the work. Some of the symptoms were removed, and more of the skin appeared, and the hands began to move in their case as though they were not of a dead weight. The condition of the skin of the hands as well as of the feet, rather improved than continued. There was no change in the system. He suffered usually from a cough with expectoration, and on examination of the chest the lungs were found to be emphysematous.

On the 1st July, having doubts as to the true nature of the case, I asked Dr. Webster to see him with me, and a little later Dr. Garis Melroy, both of whom had devoted considerable attention to the subject of leprosy. After consultation with them, and reading MM. Danielssen and Brock's descriptions of the disease as occurring in Norway, I had no doubt that the case was one of true leprosy, although presenting some unusual features. I had hitherto failed to make observations on the cutaneous sensibility, but now proceeded to do so. The patient states that he has, since childhood, had a feeling of numbness in the little finger of his right hand, which has increased lately. On pinching the little finger he feels a darting pain in the course of the ulnar nerve up to the elbow. There is also some numbness on the inner side of the right foot; sensation is decidedly less than on the corresponding part of the left foot, where it appears to be exaggerated. Examined with the compass, there is a de-

cided loss of sensibility both in the feet and hands. On the dorsum of the foot he cannot distinguish the two points of the compasses until they are four inches apart, instead of at a distance of less than half-an-inch, as I found on two ordinary patients; and on the dorsum of the hand a distance of two inches and a half was reached before he recognized two points. In one or two spots on the thighs, near tubercular elevations, there was decided hyperæsthesia. I could not satisfy myself that there was either more or less sensation in the tubercles or the discolored patches than in other parts.

He constantly assured me from time to time that he felt better; he certainly had more energy, and was in better spirits. His voice continued husky, his cough troublesome, and the discoloration of the skin was on the increase. No fresh tubercles appeared. There were noticed, soon after he came into the hospital, several ulcers on the soft palate, with raised thickened edges.

He continued in this condition until the 1st September, when he was attacked with rigors and general pyrexia.

On the 3d of September an erysipelatous rash appeared. Typhoid symptoms rapidly supervened, and signs of pulmonary mischief. He refused nourishment, and on the 11th he died.

On post-mortem examination, there was found to be pneumonia of both lungs. The larynx was finely injected, as well as the trachea. There were large ulcers in the pharynx and the anterior pillars of the fauces; the ulcers were surrounded by raised borders, and were sharply cut. The kidneys appeared healthy, but rather congested.

A portion of skin from the arm was removed and examined microscopically. There was no change in the cuticle. The cutis was in many parts thickened, and raised into tubercular elevations, some of which are suppurating. The skin was harder and more opaque on section than healthy

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The following table shows the results of the regression analysis for the dependent variable "Number of children in the household" (N = 1,000). The independent variables are "Age of the head of household" and "Gender of the head of household". The table includes the coefficient estimates, standard errors, t-statistics, and p-values for each variable.

Variable	Coefficient	Standard Error	t-statistic	p-value
Age of the head of household	0.001	0.000	1.2	0.23
Gender of the head of household	-0.05	0.02	-2.5	0.01
Constant	1.5	0.1	15.0	0.00

[illegible]

This is accompanied with a marked loss of weight, the dog goes in five months or more without eating or disappearing entirely. The animal loses its long whiskers, and curls up in a ball, the head, spine, or ribs, being prominent. The skin pale livid color; the mucous membranes become swollen and watery, and the animal dies, but does not lose sensation until the last few hours. The fingers and toes drop off and are replaced by gangrene. Death is generally caused by pneumonia, bronchitis or diarrhoea. The disease is common in patients are generally "cured."

The eruption took place at 11:00 a.m. on 12/12/64. The  
 basis of the eruption was the same as the one which  
 occurs in that district.

It appears to have changed its habits. The insect was common here 10 years ago.

Explosive: 2000 lbs. (907 kg.)

*of the Arabs*, must not be confounded with the disease just described. It is characterized by hypertrophy of the skin and the subcutaneous areolar tissue. It may affect the leg, the arm, the scrotum, or the mammæ. The disease frequently begins with acute febrile symptoms, darting pains, and a feeling of tension in the course of the superficial lymphatics, which soon swell and form knotted cords, whilst the glands become swollen and tender. The superficial veins sometimes become hard and corded; occasionally there is diffused redness of the skin. All these symptoms may disappear and after a certain time recur. The part swells, is not painful, but merely uneasy from tension. The glands become large and hard, and the affected part slightly swollen.

Fig. 1.



Elephantiasis of the foot and leg.

After several relapses the swelling becomes much increased; it is soft, and pits on pressure. At length the skin is white and shining, or it is of a dark color, much thickened and studded with projecting veins; the swelling is now immense and quite hard.

The lymphatic glands often suppurate or slough, the joints are sometimes invaded by chronic inflammation, and the skin may become covered with scales as in ichthyosis, or unhealthy intractable ulcers may occur. Frequently, however, none of these complications ensue, the general health remains good, and the only inconvenience experienced is from the size of the swelling. In the scrotum this disease may attain an enormous size, so that the tumor weighs from

Fig. 2.



Elephantiasis of the scrotum.

fifty to one hundred pounds. The cuticle is often thickened, at other times quite unchanged.

*Morbid Anatomy.*—The cutis is more or less hypertrophied.

The skin is marked by deep furrows, which sometimes give the surface a nodulated look. Between the deep furrows the surface of the cutis is either smooth or covered with a multitude of protuberances. These are either small, looking like moderately enlarged papillæ, or large, and may take the form of broad bunches or slender cones, many of which are cleft at their summits. They have been compared by Henle to syphilitic condylomata. The subcutaneous areolar tissue is thickened usually by a tissue which looks like condensed areolar tissue; it may resemble fibrous tissue in appearance, and adhere firmly to the skin. Sometimes the intermuscular areolar tissue is affected, and the muscles are atrophied or become fatty. The bones are occasionally diseased, thickened, and nodulated. Sometimes an albumino-fibrinous fluid is found in the meshes of the newly-formed tissue.

This disease is endemic in the tropics. It is most common in adults, and is somewhat more frequent in men than in women.

*Treatment.*—Iodine, frictions, and regulated pressure are the means which have been found useful. When it attacks the scrotum it can only be removed by the knife. When the leg is attacked, amputation may also be had recourse to, but it is only to be advised where the limb is of very great size. In these cases the ligature of the femoral artery has been followed by the subsidence (to a great extent at any rate) of this disease. This treatment has been followed by Mr. F. Jordan, of Birmingham, Mr. Butcher, and others.

#### **FRAMBESIA.**

(Yaws) (Sibbens or Sivvens).—An exanthem rarely, if ever, seen in England; it has, however, been met with in the north of Scotland and in Ireland; it is common in the West Indies and Africa. At the onset there is slight fever, which is soon followed by an eruption of small flat papules,

which increase in size till they attain a diameter of half an inch; the crop of papules is not completed at once: new ones appear whilst old ones are declining. The eruption is greatest and the spots are largest on the face, axillæ, arms, groins, and pudenda. After eight or ten days the eruption becomes pustular, and a crust is formed, beneath which a foul sloughy ulcer is found. On the surface of this ulcer red fungous granulations having some resemblance to a raspberry spring up. (This circumstance has given rise to the name from the French word *framboise*.) These ulcers exist in all stages on the body at the same time, and are often accompanied with ulceration of the throat. The eruption may continue from a few weeks to seven or eight months; after a time the sores contract and cicatrize, leaving no mark unless the inflammation has run high. The disease is followed by much emaciation and debility, frequently by dropsy. Framboesia is transmitted by contagion. It has been communicated by inoculation. It is rare amongst the white races of mankind.

*Treatment*.—Locally, mild stimulating ointments. Internally, tonics, nutritious food, and occasional alterative aperients appear to be indicated. Mercurials have been used in former times, but are now generally believed to be worse than useless.

### KELIS, OR KELOID.

It appears to be uncertain whether the name of this disease was derived from *καλαί*, a crab's claw, or from *καλός*, a scar, such as is produced by a burn. It is probable that Alibert, in using the word, had the first-named derivation in his mind; he first described the disease under the name of *cancroïde*, that is, like *cancer*, or a *crab*. (*Description des Maladies de la Peau*, 1806.)

Dr. Addison (*Med.-Chir. Soc. Trans.*, 1854) has adopted



the latter derivation, and has described two forms of disease which he calls "the keloid of Alibert," and "true keloid." There is room to doubt whether these affections are distinct diseases, or mere varieties of one disease. The *keloid of Alibert* first appears in the form of small, hard, shining tubercles,

Fig. 3.



Keloid tumors.

roundish, oval, or quadrilateral, somewhat firmly set, of a dusky or deep red color, and generally attended with itching, pricking, shooting, or dragging pain in the part.

These tubercular elevations slowly increase in size until they attain a height of two or three lines, and comprise an area varying from that of a horse-bean to that of an almond.

The tubercles often become pale on their summits, and somewhat glistening. They are hard, firm, and elastic, like fibro-cartilage; after a while they become broader, more irregular, and occasionally depressed in the centre. Some delicate whitish tendinous-looking lines with minute bloodvessels are observed on the surface of the swellings. Each separate swelling extends by tapering claw-like processes, from a quarter of an inch to an inch in length, which appear to cause a puckering of the skin. Growth takes place very slowly for months or even years, and a size may be attained of an inch or two inches in length by half-an-inch or an inch in breadth, and an elevation above the skin of three or four lines. Sometimes years elapse without any change in the affected parts. The swellings are solitary or multiple; in the latter case they are near together or far apart. The development of them is usually preceded or accompanied by heat and some degree of puffiness of surrounding parts, but there is no redness.

At an advanced period of the disease pressure sometimes causes pain.

The morbid growth is sometimes formed on the cicatrix of a burn or other wound, and especially on wounds caused by flogging; but it is frequently developed on sound skin. Alibert called the disease when produced on an old scar, *spurious* keloid; Dieburg (Deutsche Klinik, Aug. 1852) has called it "narbenkeloid," the cicatrix keloid, and when not preceded by a scar, *spontaneous* keloid. The first variety appears to occur rather more commonly on men, and the latter more frequently on women. Both forms occur commonly between the age of puberty and middle age; the favorite seat is the front of the chest, but it may attack any other part of the body. From its frequent occurrence in several parts at the same time, it has been believed to depend on some peculiar diathetic condition. Alibert states that

*spontaneous* keloid is accompanied with much more pain than that kind which occurs on an old scar.

Dr. Addison has given the name of *true keloid*<sup>1</sup> to a form of the disease which, like the other, has its seat in the subcutaneous areolar tissue, but is first indicated not by tubercular elevations but by a white roundish patch of the skin, varying in diameter from the sixth of an inch to an inch and a half or two inches, very slightly elevated, and surrounded by a zone of redness or some venous congestion. It is unattended at the beginning with pain or uneasiness; occasionally it presents here and there on its surface a faint yellowish or brownish tint. After a time there is itching and pain, with a feeling of tightness or constriction on the affected parts, and frequently a certain amount of subcutaneous hardness and rigidity, extending beyond the site of the original patch, and not accompanied by any change in the aspect of the skin. At length the part first affected becomes more or less hide-bound; and a similar change takes place among the more superficial tendons and fasciæ, so that the tendons become so fixed that they can no longer perform their functions. In this way a whole member may be permanently contracted. The fingers are specially liable to this condition. After a time the skin shrinks or shrivels, assumes a dry, smooth, or glistening aspect, becomes reddish or yellowish; the cuticle exfoliates; and there is a tendency to superficial ulceration, or to the formation of obscure nodular elevations. From part of the boundary of the shrivelled skin there are sometimes seen reddish elevated claw-like processes of from half an inch to two inches in length, extending into the sounder integument. During the progress of the disease, it is not

<sup>1</sup> This use of the term *true keloid* appears to have caused some confusion, in consequence of Alibert's having previously appropriated it to the *spontaneous* keloid, commencing exactly in the same way as that developed on a scar.

uncommon to find oval or roundish and flattened hard tubercular elevations, about the size of a split-pea or horse-bean, without any discoloration except what may result from accidental friction.

*Prognosis.*—Both these forms of disease are very chronic and intractable. They do not appear to exercise any decidedly injurious effect on the general health. Their seriousness is due solely to the local inconveniences.

*Treatment.*—Extirpation by the knife or by caustic has been constantly followed by their renewal. The use of iodine has been recommended, but there is no evidence in favor of its having done any good.

The term *Sclerema* has been given by M. Thirial to a condition very much resembling the true keloid of Addison. M. Gillette, in the "Archives générales de Médecine," Dec. 1854, has written a monograph on the subject. Dr. M'Donnell (Dublin Hospital Gazette, vols. ii. and iii.) describes cases of the same kind as sclerema or pachydermatous disease. They have the following characters: The skin is hard and rigid, it cannot be pinched up; the movement of the joints may be interfered with by it. It most frequently attacks the upper part of the body. The skin varies from dirty white to tan-color; the temperature and sensibility remain normal. It generally terminates in slow resolution extending over many months. It is sometimes attended with emaciation, cough, and erythema at other points of the skin. Warm ferruginous baths have been apparently attended with benefit.

In fourteen cases collected by M. Gillette (Archives Gén. de Méd., Dec. 1854), two were under eight years of age, two between fifteen and seventeen, and others at different ages up to sixty-one years. Twelve of the subjects were females, and two were males. In seven cases there was a rheumatic history. The progress varied in rapidity in different cases. The

temperature of the part was not affected. The termination was usually by slow resolution. It is suggested that possibly the cough with which it is occasionally accompanied may be due to the same change in the bucco-laryngeal mucous membrane. The tongue was involved in several parts. It differs from the sclerema of new-born children in several respects:—the parts attacked are the upper parts of the body, not as in infants the most dependent parts; there is no sign of œdema, no depression of temperature, no internal serous and hæmorrhagic effusions.

In the twelfth volume of the Pathological Society's Transactions a case is reported by Mr. Sedgwick which occurred in a child in her fifth year. It is described as "true keloid," of which it presents many of the characters. The disease commenced at the age of two years and a half on the back, in the form of a white glossy patch; and the skin looked thin and delicate. This was followed by other patches presenting the same characters, until at the time of the report there were fourteen in all; the parts affected being the back, the right side of the jaw, the front of the body, the skin behind the right ear and inside it, and the outer angle of the right lower eyelid; and the one on the right side of the tongue near its margin. The patches change from white to a pale indistinct yellow, which gradually deepens in tint, merging into a light-brown or dirty straw-color, surrounded by a faintly vascular halo, which varies in different patches and in the same patch at different times, depending apparently on such conditions as affect the supply of blood to the skin. In fully-formed patches the halo measured from one-half to an inch in breadth. After a time the oval centre of the patch became horny and slightly raised, with distinct well-defined edges. No pain or tenderness was felt in any of the patches. The child was strumous, emaciating, and weak. This report was made in October, 1860. I ha-

lately seen the child (Nov. 1864), and find her general health much improved. The skin has almost completely recovered its healthy characters; very many patches could not be traced at all; a few only can be pointed out by her mother. There is in them the least possible white glossy appearance, but no depression or elevation. On rubbing the skin these parts become reddened more easily than the surrounding skin, and the mother says that in the cold they look blue. The only treatment adopted has been cod-liver oil and tonics. There is still a longitudinal streak down the right half of the tongue, which is glazed and free from the normal papillæ. One fresh spot is making its appearance near the shoulder.

This case appears to correspond to those referred to by Dr. McDonnell and M. Gillette, and to differ from Dr. Addison's true keloid, especially in its course.

*Pathological Anatomy.*—The section of the keloid of Albert is dull white, creaking on section, and exuding no fluid on pressure. The microscopical elements appear to be fibro-cellular tissue in course of development; according to Dieburg, the fibres are developed out of spindle-shaped cells. This fibro-cellular tissue becomes condensed, and after a time atrophied. Förster describes a case of *sclerosis* in a man aged twenty-two years.<sup>1</sup> The change commenced on the leg around an ulcer; it subsequently extended to the abdomen, chest, and upper limbs. The skin became tough, hard, and immovable, and of a dark color; perspiration and sensation ceased in the affected parts. Some of them recovered their normal condition, others ulcerated; in some the cuticle desquamated, and the cutis became dry, smooth, and white. In the darker-colored portion the connective tissue of the skin was much thickened and hardened; the fat had disappeared from the subcutaneous tissue, which was also hardened; the papillæ, glands, hair, and capillary vessels were unchanged;

<sup>1</sup> Med. Times and Gazette, Oct. 1861.

but few nerves were seen, being lost in the hypertrophied connective tissue. The cutis above the sternum was three lines thick. In the pale patches the cuticle was very thin, the pigment had disappeared, as well as the papillæ of the cutis. The man died of tubercle in two months. This case differs from those previously described in several respects.

#### PACHYDERMATOCELE.

A peculiar condition of skin has been described by Dr. Valentine Mott<sup>1</sup> under this name, in which there was hypertrophy of the skin and the subcutaneous areolar tissue, with few bloodvessels running through it. It is congenital, beginning as a brown spot or mole, and increasing with the growth of the individual to an enormous size. The growth is browner than the surrounding skin, and is very flabby to the touch. In some cases there are two or three layers arranged like the folds of a tippet. There does not appear to be any tendency to return after removal.

#### WARTS, OR VERRUCÆ.

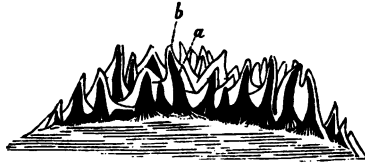
These usually come under the care of the surgeon. They consist of hypertrophy of the papillæ of the cutis, and of the cuticle which covers them. They are either rounded, filiform, or flat. The filiform or digitated wart is seen on the scalp. They are sometimes smooth on the surface, but more commonly uneven, presenting elevations corresponding with the summits or the papillæ, and depressions corresponding to the intervals between them. The depressions are sometimes so deep as to split the wart into a number of distinct segments. The papillæ of which they consist are either short or long; they vary also in shape, and are more or less numerous in each wart. Each papilla is supplied with a single vascular

<sup>1</sup> Med.-Chir. Soc. Trans., vol. 37, p. 155.

loop, or several loops, which come near the epidermis covering the papilla.

Warts are found occasionally beneath or at the side of the finger or toe-nails; they are softer in texture and more rapid

Fig. 4.



Section of a wart, from the armpit, magnified nineteen times. The enlarged papillæ of the sensitive skin, inclosed in conical sheaths of scarf-skin are seen. *a*. One of the enlarged papillæ. *b*. Its sheaths of scarf-skin.

in growth than other warts. They originate from the sensitive skin beneath the nail, between its free margin and the matrix; they are often very painful.

*Verruca confluens* is a term used by Mr. Erasmus Wilson to designate a variety of warts found chiefly on the neck, the upper part of chest, and the backs of the hands and arms. It consists of an aggregation of closely-packed papillæ, often smooth on the surface, and without any evident indication of the isolation of its component papillæ; but on pinching up the skin of the part its surface will break up into minute fissures showing its papillary structures, which has been compared to coarse plush. These growths are of uncertain size and shape; they may occur in patches or irregular bands.

*Causes*.—Occasionally warts are congenital. The tendency to them is sometimes hereditary. Mr. Sedgwick gives an account of a family where warts on the hands were limited to the female line during two generations. The most common age for them to appear is between two and fourteen years. It is a popular belief that the blood from a wart is capable of reproducing others when applied to the external



surface; a case recently reported in the French journals tends to confirm this idea, and Cruveilhier reports a case of the same kind (*Anatomie Path. Générale*, tome iii. p. 926). Usually, however, the blood from a wart has no such effect.

Warts sometimes disappear in the most sudden and unaccountable manner, which has given rise to the superstition of charming them away. This sudden disappearance does not often occur, except on the hands of young persons.

General treatment does not usually exert any influence upon them. It has been stated, however, that magnesia given in small doses two or three times daily will cause them to disappear. A boy under nine years came under my care, with from twenty to thirty large warts on his hands, arms, and elsewhere. They were rapidly growing and increasing in number. I gave him magnesia, five grains at a time, and cod-liver oil, one drachm three times a day. In a week the warts were better, no fresh one having appeared, and some of the old ones were dwindling. In a month they had all disappeared. I have tried the same treatment in one or two other cases without the same success, so that probably the result above described must be looked upon as a mere coincidence.

Warts may be snipped off, and their bases touched with lunar caustic, when they are pedunculated. When they have a broad base of attachment they may be touched with glacial acetic acid or strong nitric acid. Warts, when occurring on the scalp, as they sometimes do in large numbers, may be usually got rid of by the application of a blistering fluid.

*Condylomata* consist also of hypertrophied papillæ, covered with epidermis. They are more vascular and softer than warts. They are met with on the inside of the thighs, on the perineum, about the anus, on the glans, or in corresponding situations in the female. They assume a great variety of shapes, and depend upon the irritation of the discharges of gonorrhœa or syphilis, together with the natural perspira-

tion, usually in persons of dirty habits. Gustav Simon states that, in addition to the normal elements met with in papillæ, there are found in the enlarged papillæ of condylomata the elements of newly-formed areolar tissue, viz., white fibrous tissue, the cells, and elastic fibres.

Mucous tubercles appear to agree with condylomata in anatomical structure, so that they are called by Gustav Simon flat condylomata. The treatment of these may be learned from works on surgery.

*Nævi* (Neligan's Atlas, pl. xiv., fig. 1) consist of enlarged and dilated vessels. They are either confined to the skin or extend to the subcutaneous tissue. When in the skin, they are either red or more or less dusky, according to the predominance of arteries or veins. Their treatment is purely surgical. They are extirpated either by the knife, by ligature, by caustic, or by introducing vaccine matter into them if in unvaccinated subjects.

### CORNES

Consist of masses of thickened cuticle peculiarly arranged, with a corresponding depression in the cutis vera. The central portion is composed of harder and more translucent material than the rest; the cells are here arranged obliquely, so as to give rise to concentric arched laminæ, with their concavity downwards, to fit the depressed portion of the skin. In the outer portion the cuticle is arranged as in adjoining parts of the skin, but is thickened. They occur on the feet, and more rarely on the hands, in parts exposed to pressure or friction, as on the dorsal surface of the joints of the toes, the flat ends of the toes, the palms of the hands, and knuckles. They may be caused by tight or by loose ill-fitting boots. When occurring between the toes they are called soft corns, the cuticle being softer and whiter from its being saturated with the secretion of the skin; in them the

central portion is often depressed, not swelling out from the imbibition of fluid so much as the margins. Some so-called

Fig. 5.



The structure of a corn illustrated by means of a diagram in section. *a, b, b.* The sensitive skin surmounted by its papillæ, the papillæ at *a*, corresponding with the central part of the corn, being larger than at *b, b.* *c.* The scarf-skin of the central part of the corn, being the sheaths of the large papillæ, *a*. This is the part popularly termed the root of the corn. The sheaths are of precisely the same nature as those of a wart. *d, d.* The thickened scarf-skin, covering the smaller papillæ of the declivity of the corn. The scarf-skin is seen to be laminated, and the broad dark streak, *e*, is the discolored remains of a stratum of blood, poured out when the matter of the streak rested on the papillæ.

soft corns are really rather warts than corns, from the development of the papillæ. In the cellular tissue beneath a corn there is often a synovial bursa situated, which may become inflamed or enlarged. It is probable that these bursæ exist quite independently of the corns, and take no part in their formation.

A predisposition to the formation of corns may be transmitted from parent to child.

Corns therefore differ from warts, inasmuch as the cutis is depressed and the papillæ reduced in size, whereas in warts there is hypertrophy of the papillæ.

The ordinary practice of chiropodists is to cut out the centre of the corn deeply, leaving the outer portion, and to protect the centre from pressure by plasters. This method often has the effect of changing the structural arrangement of the growth. The central part sometimes becomes filled with what is called *fibrous* corn, that is, one with a vertical arrangement of the cuticle which ensheathes a few elongated and sensitive papillæ. In other cases the effect is to cause an absorption of the cutaneous papillæ.

A *callosity* consists merely of a thickened cuticle, without any change in the cutis, produced from pressure; it may go on to the production of a corn. The main indication in the treatment of corns is to remove the exciting cause, namely, pressure. Boots should be made to fit the foot, and not according to fashion. The parts should be frequently bathed with warm water, or touched with glacial acetic acid, and the cuticle may be then removed from time to time with a blunt instrument. The use of diachylon-plaster, or rubbing down with a corn file, after this treatment, will be serviceable. In the case of very hard corns, the corn may be softened by the use of wet lint and oiled silk, kept on for some hours; the centre may then be carefully cut out, and the margins left by its removal bevelled out. A plaster should then be applied of soft thick buckskin or amadou, spread with adhesive material, a hole being cut in the centre corresponding to the size of the corn, the outside margins of the plaster being bevelled with a sharp knife.

For soft corns, which are often very irritable, the application of nitrate of silver, or of glacial acetic acid, is of service; or oxide of zinc dusted over it, and the toe wrapped in cotton-wool. The toe should be constantly kept apart from the others by cotton-wool.

There is a kind of wart which not uncommonly makes its appearance on the hands of persons much engaged in making post-mortem examinations. It has been called by Dr. Wilks, "*verruca necrogenica*," and is well modelled in the Guy's Hospital Museum. The parts affected are the knuckles of the fingers, or the wrist. There are reddish-brown raised patches, rough and fissured. The most prominent parts are dry and brittle, so that fragments of cuticle are frequently detached. If a piece is picked off it will sometimes bleed a little, but not otherwise. It is very chronic in its nature, having a tendency to spread if the exciting cause is in ope-

ration. It sometimes begins as a pustule, which breaks, but does not disappear, the base of it becoming hard, and fresh suppuration may arise. It usually begins as a slight thickening of the cuticle. It is produced by the irritation of the morbid fluids of the dead body, and it seems to occur more frequently in those engaged in pathological examinations than in those engaged in anatomical dissections, showing that bodies recently dead are more likely to induce the change than those that have been dead a longer period. It may be cured by caustics; and when not very large, by keeping the part covered with a piece of leather spread with mercurial plaster, or even, perhaps, by excluding the air by means of collodion constantly applied.

#### HORNS.

Horns resemble warts in their elementary structure, but present a very different appearance from the difference in their structural arrangement and their greater size.

Fig. 6.



A horn, which grew on the head of a man, during a period of nine years. It measures more than four inches and a half in length, and is two inches and three-quarters in circumference.

One variety of horns consists of epidermis more or less condensed and desiccated, containing within them a fibrous

looking papillary core (derived from the derma), which consists of extremely hypertrophied papillæ, which are finely supplied with bloodvessels. These horns are marked externally by longitudinal striæ, are rough and fibrous-looking, and usually taper towards the end. They are often rapid in growth, and attain a large size. This form is described by Mr. Edwards in "Edinb. Med. Journal," Nov. 1850. There is in the museum of the Royal College of Surgeons, a horn formed of compact bones, encased in horny matter; it is "supposed to be an excrescence from a human scalp." Another variety of horns grows on a vascular matrix, which is flat or very slightly projecting beyond the level of the skin. These horns are usually marked by annular constructions; they have a tendency to become spiral; the layers of cuticle are horizontally arranged, and are hence more brittle. The commonest situation for horns is on the head, next to the lower limbs, and then on the trunk, the face, and the penis. The substance of the horns is composed of epidermic cells. In some cases they appear to have taken their origin from the epidermis lining a sebaceous follicle.

Klenke describes a species of horn formed of adherent hairs so thoroughly intermixed that their structure can scarcely be made out.

*Treatment.*—The only way to get rid of these growths is to excise them, together with the portion of skin on which they are formed.

## CHAPTER XVI.

### GANGRENOUS INFLAMMATIONS OF THE SKIN AND SUBCUTANEOUS TISSUE.

FURUNCULUS.—ANTHRAX.—MALIGNANT PUSTULE.—CIRCUMSCRIBED GANGRENE.

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#### BOIL, OR FURUNCULUS.

THIS is a circumscribed inflammation of the skin and areolar tissue, followed by gangrene of the central portion of the involved tissue; this, "the core," is expelled through an opening in the skin, together with the degenerated inflammatory products.

Two varieties have been described; the ordinary boil and the blind boil.

(1.) The ordinary boil begins by a slight elevation of the skin, attended with pain and heat; it soon becomes conical, and of a bright red color. The pain increases and is of a piercing, throbbing character, with some feeling of tension and weight, and extreme sensitiveness on pressure. After a few days a purulent spot is seen at the summit of the swelling, which soon bursts, and a little sanious pus escapes. Through this narrow aperture a yellowish slough of cellular tissue gradually works its way. The cavity of the boil for a day or two discharges sanious shreddy pus; it then fills up with granulations, and cicatrization takes place, leaving a small depressed and slightly discolored spot.

(2.) The flat, more diffuse, or blind boil, begins as a small pimple surrounded by a red and exquisitely tender areola. The pimple either slowly suppurates, or a vesicle is formed containing bloody serum; on the rupture of the cuticle a

little shreddy sanious pus is discharged, but much less solid slough than in the ordinary boil. Sometimes these boils disappear without proceeding to suppuration; they form slowly and are less painful than others.

*Causes of Boils.*—They are sometimes epidemic. They are more common in spring and early summer than at other seasons. Hydropathic treatment often has the effect of inducing boils. It would seem that the change of diet, with the increased secretion from the skin and kidneys, is the active cause in this case. The process of "training" often causes boils. Working in the dissecting-room is said to induce boils. The contact of some cadaveric secretions has the same effect. The flesh of animals affected with pleuro-pneumonia is said by Mr. John Gamgee to have the effect of causing boils. This is not proved.

Eruptive fevers are sometimes followed by boils. It was stated by Prout that diabetes was a common cause of boils and carbuncles. They are certainly not very unfrequent in diabetic subjects; but sugar is not found in the urine of the great majority of those who are affected with boils and carbuncles.

*Treatment.*—If the cause can be determined, this will be a guide to treatment. It appears that a well selected and varied diet is of great importance. The reaction of the urine should be examined, and an alkali or acid administered if necessary.

Amongst empiric remedies yeast may be mentioned as in some cases exerting a decidedly beneficial effect. It may be given on an empty stomach in doses of a tablespoonful three times a day, continued for two or three weeks. Quinine in large doses, as recommended by Dr. Jackson, is sometimes useful. It should be given until there are symptoms in the head and ears that a full dose is given, and continued for three or four weeks. Locally, if seen early, they may be



submitted to an abortive treatment, which occasionally succeeds. The inflamed pimple is to be touched lightly with caustic liquor ammoniæ, or acid-nitrate of mercury. Incisions have been recommended at an early period with the same object. If there is great pain, poulticing or water dressing is useful, but they must be used cautiously, as they sometimes bring out fresh crops of eruption. If not very painful they may be covered instead with soap plaster spread on chamois leather, and when discharging, emplastrum resinæ used instead of emplastrum saponis.

### CARBUNCLE.

This is distinguished from a boil by its greater size, its being less clearly defined at the margins, less conical, and

Fig. 7.



Ulcerated Carbuncle.

less prominent in proportion to its size. It extends more deeply than a boil, the pain is more severe, and the skin is more livid and is perforated by several apertures. Unlike

a boil, it usually occurs singly. It is more common in men than women, and after the age of twenty years. The parts most affected are the nape, the buttocks, and the external surface of the limbs.

The cause is not obvious. It is supposed to be more common in gouty people than others; it is equally common amongst the rich and the poor. The use of meat from animals affected with pleuro-pneumonia has been alleged as a cause, but without much evidence in this country. Dr. Livingston, however, states that in Africa when the flesh of animals that have died of pleuro-pneumonia is eaten, it causes a malignant carbuncle.

Death may occur from exhaustion or from pyæmia.

*Treatment.*—The most generally adopted plan locally has been to make a free crucial incision during the progressive period of the disease. A subcutaneous crucial incision has been recommended by Mr. French. The free use of caustic potash has been recommended as saving hemorrhage, diminishing the extent of the disease, and reducing the risk of pyæmia. Of late years there has been a tendency to discountenance any of these severer measures, and many surgeons leave the local disease to take its course. Mr. O'Ferrall (Dublin Hospital Gazette, 1858) strongly recommends the application of pressure by means of soap plaster. When the carbuncle is discharging, some stimulating application is useful, such as Peruvian balsam or the cerate of turpentine and resin. The constitutional treatment must be suited to the general condition of the patient. Stimulants are usually indicated, and a liberal diet with a tonic if the stomach will bear it.

There is a peculiarly malignant form of carbuncle which attacks the upper lip, and is attended with extreme depression, and sometimes a fatal result. It has been described as multiple and agminated furuncle of the face.

## MALIGNANT PUSTULE, OR CHARBON.

Some herbivorous animals, oxen, sheep, horses, and others, are liable to an internal disease to which several names have been given. In the ox and sheep it has been called "the blood," "joint murrain," "black-quarter," "black-leg," or the "quarter evil;" in French, "charbon," "quartier," "sang de rate," in the sheep, and "le sang" in the ox; and in German, "Milzbrand."

Malignant pustule in man is derived from the poison generated by this disease in animals. It may be communicated by direct contact with any part of the animal, whilst straw or articles of clothing may act as media for its transmission. The use of the flesh and milk of diseased animals is a doubtful medium of infection.

The disease is most commonly seen on the face and hands. It is at first a purely local affection, and is at this time quite under control.

From one to three days after infection, there appears on the part infected a small red spot like a flea-bite, which is sometimes preceded by, and always attended with, considerable itching. After about twelve hours a small vesicle, about the size of a pin's head, appears; this contains a little brownish-red or yellow serum, and on its rupture the itching usually ceases, and the skin beneath is seen to be dry and of a dark color. This portion of skin is in reality dead. In less than twenty-four hours a fresh crop of vesicles appears, distended with brownish-yellow serum, situated on an irregular circle round the dead skin. After twenty-four or forty-eight hours, the parts beneath the eschar sometimes swell, harden, and form a solid lump, which is tolerably well defined ("bouton"). The mortification now extends to the circle of vesicles, or beyond it, and fresh ones form around, and the surrounding skin, which was pale, becomes of a livid color.

Oedema now forms in a surrounding investment, which gradually subsides into the healthy tissue. There is little pain, and but little deviation of temperature. The central slough continues to rise above the healthy part, which is hard, and the surrounding oedema is very great.

Malignant pustule usually runs its course either as a favorable or fatal result, in from four to nine days.

*Constitutional symptoms* sometimes appear soon after the first appearance of a vesicle: rigors, tremor, and general depression. At other times they come in a few days later; the tongue is coated; the pulse full, frequent, and soft; the appetite is gone, and the bowels are constipated. These symptoms are usually followed by delirium, vomiting, fainting, dyspnoea, loss of sleep, cold sweats, and collapse like that of cholera.

*Post-mortem Appearances.*—Decomposition is rapid; the serous cavities contain a little dark serum; the blood is fluid and black; small ecchymoses are formed on the mucous membrane of the stomach and intestines; the spleen is engorged and soft; the liver and posterior lobes of lungs are much congested; the heart and brain are also disposed to early softening and congestion. The local slough consists of dry layers, dark brown or black in color, like old leather in consistence, and creaking under the knife.

*Prognosis.*—The younger the patient the greater is the chance of recovery. The head and neck are the most dangerous seats of malignant pustule. The previous constitutional condition of the patient will materially affect the prognosis. If the case come under treatment before constitutional symptoms have appeared, a favorable result may be expected. It is considered to be a good omen when the part is bright-red or becomes much raised in temperature, or if the induration is distinctly limited.

*Treatment.*—The actual cautery or with alcohol

be freely applied, or if the disease has made great progress before coming under treatment, and the tissues are involved to some depth, a portion of the eschar should be removed by the knife, and potash then used. Internally, stimulants and food which is nutritious and easily assimilated should be given.

For further information on this subject the student should consult a monograph by M. Bourgeois, entitled "*La Pustule Maligne*," Paris, 1861, and a pamphlet by Dr. William Budd, on the occurrence of malignant pustule in England. It is certainly comparatively rare in this country, but Dr. Budd adduces a number of cases which he considers to have been examples of it in England.

A peculiar vesicular disease, contracted from sheep, is described by Dr. Burrows. ("*Med. Times and Gazette*," June, 1856.) It occurred in two butchers, who had wounded themselves whilst cutting up sheep's heads. It consisted essentially of an eruption of successive crops of vesicles and bullæ, which were in most parts isolated, but in some parts confluent. They appeared principally upon the most delicate portions of the skin, as the cheeks, the lips, the throat, breast, and limbs. Vesicles or blebs were also found on the mucous membranes of the eye and the mouth. The external appearances resembled a combination of pemphigus and herpes. One case occurred five weeks after the man had wounded his thumb in cutting up the head of a sheep whose lung was noticed to be full of white knobs. It began with a spot on the lip, and soon extended over the body. It was attended with a good deal of constitutional disturbance. In the other case the man died after some weeks, worn out by the irritation, and copious discharge from the surface.

*Circumscribed Gangrene of the Skin.*—Cases have been described by Sir B. Brodie in which circular portions of the skin, after being painful for a short time, suddenly become

hard, white, and dry; in fact, undergo white gangrene, and this without any apparent cause. In a case recorded by Dr. Rooke in the "Lancet" for October, 1864, gangrene attacked a number of patches of the skin in rapid succession; it was preceded by a circumscribed erythema; the gangrene was white but not so dry as in Brodie's cases. The patient was an unmarried lady, of hysterical tendency, aged thirty-nine years. The possibility of such gangrenous patches being produced by some caustic for the purposes of imposture must be borne in mind. In Dr. Rooke's case the patches were arranged more or less symmetrically, appearing to indicate a constitutional or general cause. It has been suggested that the appearances produced were such as might have been caused by preparations of cantharides, and the occurrence during the progress of the case of dysuria and hæmaturia lends some plausibility to this suggestion. But I am not aware that cantharides will produce such a condition of skin. The patient was closely watched, and no caustic was ever discovered. The patient improved under the internal administration of mercury; and locally, what seemed of most use was acupuncture of the patches whilst in a state of erythema, and the application of tincture of iodine to the surrounding skin.

This case, in common with others, must be regarded as somewhat doubtful in its nature, inasmuch as it is at any rate not impossible that all the local changes were artificially induced.

## CHAPTER XVII.

### PARASITIC DISEASES.

DISEASES DUE TO ANIMAL PARASITES, SCABIES, &C.—DISEASES DUE TO VEGETABLE PARASITES, TINEÆ, &C.

THIS order of skin diseases has been introduced since the time of Willan, in consequence of microscopical investigations.

The order includes all those diseases in which a vegetable or animal growth is an essential part of the disease; in other words, those diseases which cannot exist without the parasite. Some writers assert that the disease exists independently of the parasite, whose growth is favored by the diseased condition; that the parasite is in fact the result, and not the cause of disease.

Mr. Jabez Hogg has been one of the chief supporters of this view. In an article in the "Transactions of the Microscopical Society," vol. vii., 1859, p. 39, he states that he has found the spores and mycelia of fungi not only in the diseases usually regarded as parasitic, but in a number of other affections, viz., psoriasis, ichthyosis, lichen, and eczema. He argues from this that the parasites depend on the diseased state of skin, and do not produce the disease.

In reply to this, it is urged that the diseases of the order parasitici cannot exist without the parasites, whilst parasites are only occasionally found in other diseases, and are then accidental.

For the production of true parasitic skin-disease two conditions are necessary—the reproductive bodies of the para-

site, and a suitable nidus for their propagation in the skin. With these two elements present, the peculiar changes are produced in the epidermis and the hairs. Few, if any, of the parasites flourish on perfectly healthy skin, but we are not yet acquainted with the exact condition which favors their growth.

Mr. Erasmus Wilson, in the "British and Foreign Medico-Chirurgical Review" for January, 1864, has an article on the "Phytopathology of the Skin, and Noso-phytodermata, the so-called Parasitic Affections of the Skin." In this article he maintains the opinion that the parasitic growths are produced by granular degeneration of normal tissues. That the so-called parasites are really vegetable may be proved by the fact that they will grow when removed from the body, and that they have all the chemical and structural properties of well-known fungi. The doctrine that animal tissues can degenerate into vegetable structures is so novel, and unsupported by any evidence, that it may be left to refute itself.

It is quite in accordance with analogy that fungi should grow on the surface of the human body, as they grow on the lower animals. The discovery of the vegetable nature of muscardine, a disease which causes such ravages amongst silkworms, induced Schönlein to suspect that vegetable growths were concerned in the production of some human skin-diseases.

The diseases in which it has been established that vegetable parasites are essentially concerned are favus, common ringworm, and chloasma.

There are two other diseases, regarded as parasitic by many good authorities, in which microscopic fungi have no doubt been seen, but in which the fungi are often looked for and not discovered, so that no doubt has been thrown on the true



nature of the diseases. They are *sycosis* or *mentagra*, and *tinea decalvans* or *alopecia circumscripta*.

The fungi detected in the several diseases have received distinct names, but we know too little of the fructification and full development of each to pronounce an opinion on their specific identity or non-identity. In their pathological effects they are distinct, but whether botanically they are so or not must be left for future careful and experienced students of cryptogamic botany to determine.

Dr. Lowe has adduced evidence to show that the fungus of *favus* (the *achorion Schoenleinii*), when developed, is the same as *aspergillus glaucus*, a well-known fungus, met with in yeast.

Fungi are known to present, under different conditions, very different aspects and forms; and the question of specific differences amongst the microscopic parasitic fungi is one of great difficulty, with which only those who have devoted many years to the study are fitted to grapple.

#### ANIMAL PARASITES OR ECTOZOA.

The chief animal parasites are—(1.) The *acarus scabiei*, or *sarcoptes hominis*, which causes scabies. (2.) The *pediculis capitis*, which is a common cause of impetigo, especially in the occipital region, and is met with frequently without eruption, or with but a slight papular rash. (3.) The *pediculis corporis*, which is found chiefly in the body linen, especially the folds of the shirt near the neck and axillæ; this is a common cause of prurigo and urticaria. (4.) The *phthirius* or *pediculus pubis*, which causes a lichenous rash and much irritation. (5.) The common flea, or *pulex irritans*, which causes some erythema, then a papular rash, with a very minute red point in the centre; and in some children causes vesicles, lasting several days; and in unhealthy subjects, purpuric spots. (6.) The common bug, or *acanthia*

lectularia, which causes wheals like urticaria and erythema, with subcutaneous œdema in some cases; it sometimes induces a feverish condition, lasting several hours. (7.) The *leptus autumnalis*, or harvest bug, which abounds in the summer on gooseberry-bushes, French beans, and in corn-fields in chalky or limestone districts. This imbeds itself in the skin and causes a papular elevation, attended with much itching, which increases towards night, until, after about a week, the eruption dies and the irritation subsides. (8.) *Steatozoon folliculorum*, which occurs in the sebaceous follicles, not causing any symptoms. (9.) *Pulex penetrans* (chigoe, chigger, or jigger), the sand-flea, is smaller than the common flea, and has a proboscis as long as the body. The male and unimpregnated female do not attack men; but the impregnated female is a great pest in the West Indies and in many parts of South America. It enters beneath the nails or between the toes of the naked foot, and soon enlarges into a globular vesicle about the size of a pea, by the rapid growth of larvæ, which are formed or contained in a membranous bag beneath the abdomen. It causes considerable irritation, and if the distended cavity be incautiously ruptured, the escape of the numerous progeny into the tissues is attended with suppuration and tedious ulceration. The treatment consists in dilating with a needle the orifice through which the creature has entered, and carefully removing it entire.

*Filaria medinensis* or dracunculus (the Guinea worm) is found only in a limited portion of the north tropical and sub-tropical zones—in Africa, central Asia, the West Indies, and in Demerara. The parasitic condition presents but one phase of its existence, some portion of which is passed external to the body. Dr. H. C. Carter has suggested that the young Guinea worm is probably identical with certain microscopic filaridæ found in the pools of India, especially the *urolabes palustris*; and he thinks it is by the entrance through

the integument of these minute filaridæ that the Guinea worm effects its lodgment in the body, making its way through a sweat-duct or hair follicle. Mr. Busk, however, doubts the correctness of this opinion respecting the form assumed by the young Guinea worm, and the mode in which it finds its way into the subcutaneous tissue. It is certainly conveyed directly from without through the integuments near the part in which it is found lodged. When arrived at maturity, it varies in length from two feet or less to six feet or more, and from one-tenth to one-fifteenth of an inch wide. It is cylindrical, and nearly white when fresh; it is very tough and elastic; it is smooth, but marked with very fine, irregular, circular rugæ. It consists of an elongated tube, open at one end only; the interior is lined by an enormously dilated cavity, which would be the uterus were the animal sexual. It is believed, however, to present an illustration of parthenogenesis, or at any rate to produce, by a sort of gemmation, innumerable embryos, which are usually found in an active state in the midst of a grumous substance in all stages of development. The male Guinea worm is not known. An interesting and valuable paper on this subject is contained in the "Transactions of the Linnæan Society," vol. xxiv. p. 101, by H. C. Bastian, M. A.

The entrance of the Guinea worm into the body, however effected, is unattended with symptoms for a period varying from ten to eighteen months. When mature, the worm makes its presence known by itching, slight swelling, usually circumscribed, sometimes diffused, and which gradually looks like an inflamed pustule or boil. When left to itself the worm presents its head first. The after progress of the case depends on the general state of health, and the mode in which the extraction is performed. It should be done by winding the protruded portion round a piece of quill day by day, so long each time as it yields to gentle traction; it will

bear a moderate amount of stretching, but if broken it retreats to some depth. This is followed by deep-seated inflammation and suppuration, and may be succeeded by extensive sinuses and sloughing of the cellular tissue. In these cases it is probable that the remainder of the worm perishes, and acts as a decomposing foreign body. In other cases the worm does not perish, but the original orifice will close up in the usual way, with little or no irritation, and the entozoon may show itself at a distant part, in the same manner as at first. In India some of the experienced native practitioners are skilful in cutting down upon the worm when near the surface, and can thus seize it by the middle, and readily extract it. The parts usually attacked are the legs and arms.

## SCABIES,

(Neligan's Atlas, Pl. VI., Figs. 1, 2; Pl. XVI., Figs. 1, 2.)

Or itch, is a contagious skin affection, which assumes a variety of aspects in different subjects. The disease seems to have been known from the earliest historical periods, but its nature was not clearly established until the present century. Mention was, however, made of an itch insect by Abinzoar, in the twelfth century; but the mode of discovering it with any certainty, and accurate descriptions of it, were not given until within the last thirty years. Bateman says, "I am disposed to believe that the breeding of these acari in the scabious skin is a rare and casual circumstance."

In the present day nearly all writers on skin disease admit that the essential element in this affection, from which, more or less directly, all the symptoms arise, is the existence of a small creature, the *acarus scabiei*, or *sarcoptes hominis*, which burrows between the layers of the epidermis, and there propagates itself, causing a great amount of itching. Dr. Frazer, of Dublin, in a book recently published, doubts whether the *acarus* is the real cause of scabies. In my mind there is no

room for doubt on the matter. Usually the *earliest* symptom of this disease is *itching*, at first local, most commonly on the hands or on the stomach. After a time the itching becomes *general*. The intensity of this symptom varies much in different cases. It is usually much worse at night than in the day. As a general rule, the itching is less severe than in prurigo, and even than in many forms of eczema.

Together with this symptom there will be seen a cutaneous eruption, which is multiform; in most cases papules and vesicles predominate, whilst pustules are not infrequent, and squamæ may be met with. Some speak of scabies papuliformis, scabies vesiculosa, and scabies purulenta. It is necessary in describing this malady to separate the eruption from the signs of the parasite, which are distinctive and peculiar to this disease. The most common eruption is papular, with all the characters of prurigo, except that the papules are small. Its common situation is in front of the abdomen, the inner aspects of the forearms and of the thighs. There are generally also to be met with vesicles about the size of pins' heads, not surrounded by a red halo, usually somewhat conical; they are commonly seen between the fingers, on the front of the wrist, and, in young children, on the soles of the feet, where they become often of considerable size.

Besides papules and vesicles there are to be found not uncommonly pustules, with all the characters of ecthyma. The pustules are most frequent in young people and in those of lymphatic temperament. These cases are called pustular scabies. Pustules are commonly met with on the hands and feet, also on the nates of children, especially those so young as to be carried in their nurses' arms. Boils may also be induced by the existence of scabies.

Besides these lesions of the skin there will be generally seen black points, abrasions, and inflamed patches, due to

scratching, and often a good deal of general scaliness of the epidermis near the affected parts. Scabies is often complicated by true eczema, and more rarely by impetigo or urticaria.

I must now describe the pathognomonic signs of scabies due directly to the presence of the parasitic animal. Very near to some of the vesicles, or independently of them, there will be seen, in parts where the cuticle is thin, a whitish-gray line, generally slightly curved, varying in length from one to four lines, or, in rare cases, to an inch;<sup>1</sup> one end of this line is usually a little ragged, whilst the other end is characterized by a minute opaque white elevation, due to the insect itself. These lines or furrows bear no *constant* relation, either in number or position, to vesicles; there may be a vesicle at the end of a furrow, or a furrow may be actually in the wall of a vesicle; or vesicles and furrows may be quite distinct and independent of each other.

Before reaching maturity, both male and female acari are said to moult their skins three times; this occupies nearly five weeks, according to Gudden. The mature female acarus, as she burrows in the cuticle, deposits her ova, and cannot afterwards return again to the surface. The ova first laid are those nearest the surface, and they are ready to be hatched in about eight days, which is long enough for the upper wall of the cuniculus to be worn down by ordinary friction or by scratching. Young acaria, and the ova prematurely ejected, and male acari, are no doubt the chief media by which the disease is propagated from one person to another.

The mother insect dies at the blind end of the cuniculus, and is gradually exposed by the disintegration of cuticle constantly going on. Old furrows are often seen as open

<sup>1</sup> Hebra has seen the furrows three or four inches long.

shallow canals bounded by ragged edges, which soon get dark-colored from dirt.

These furrows, or cuniculi, should be looked for on the contiguous sides of, and at the roots of, the fingers, and on the front of the wrist. They may also be found in the axillæ, in the groins, on the penis, and around the ankles and the toes of children. They are most easily found in recent cases, or in very young children who do not scratch and tear them open. The acarus can readily be extracted from the closed extremity of these furrows by a pin slightly bent at the point. This should be introduced under the cuticle inclosing the furrow at a short distance from the closed end, where the opaque white spot may be generally seen; it should then be passed along in the direction of the furrow, and on reaching the end the creature will be brought out on the point of the pin. The structure of the acarus may then be examined under a microscope. If it be warmed by breathing on it, it may be seen, with the aid of a good pocket-lens, moving about. Its length is about one-eightieth to one-sixtieth of an inch, and its breadth from about one-hundredth to one-eightieth of an inch. Its upper surface is convex, rough, and armed with angular spines, which prevent its returning along the furrow by the way in which it entered. The lower surface has eight feet; the four front ones are furnished with stalked suckers in both sexes; each of the four hind ones is furnished with a hair in the female, whilst in the male only two have hairs, and the posterior pair are furnished with suckers like the four anterior feet. The head projects considerably beyond the body; its edge is rounded and marked by a central fissure, which is the mouth, and provided with mandibles. The female is twice as large as the male. At the posterior extremity of the male are seen appendages supposed to be organs of generation. It is the female only that burrows in the cuticle, where she lays eggs,

about fourteen in number; whilst the male travels about from place to place, and is consequently discovered with much greater difficulty. He may sometimes be met with in the pruriginous or ethymatous crusts. Küchenmeister states that he also lives in small holes in the cuticle. The period of incubation of scabies is said to vary from four or five days to a week; it is not usually till towards the end of two or three weeks that the accompanying characteristic eruptions become apparent. It may be less than four days. As a general rule, scabies gets worse the longer it exists; but there is no regularity in this respect, for a case of scabies may continue in a very mild form for a very long period; this is especially the case in persons who are very cleanly in their habits. It seldom or never gets well spontaneously. The occurrence of an acute disease, such as typhoid fever or pneumonia, will usually have the effect of diminishing or almost curing the eruption and symptoms of scabies. In some cases the skin disease does not reappear on recovery from the constitutional malady, but much more commonly at the end of a few weeks, itching is again felt, furrows are reproduced, and the other eruptions reappear. Scabies commonly avoids the face and hairy scalp; this is given as one of the diagnostic marks to distinguish it from other pustular and vesicular diseases. In children, however, it is quite frequent to find eczema of the face, or impetigo of the scalp, accompanying scabies of the body, which get well immediately the scabies is cured. I think that these may be regarded as dependent on the irritation of the acarus as much as pustules occurring on the hands or feet. On one occasion I found a furrow, and extracted an acarus from the scalp of an infant; they have also been found on the face.

*Diagnosis.*—If a patient has been suffering for several days from itching, which becomes more severe at night, and especially if he has been sleeping in a dirty lodging-house, or



with any one of dirty habits, we should at once think of the likelihood of scabies. The skin must be examined for eruption, and if there is a papular rash on the abdomen and inside the thighs, and isolated vesicles on the inner aspect of the fingers, with or without pustules on the hands and feet, our suspicions are confirmed, and the diagnosis may be considered almost complete. The coexistence of papules, vesicles, and pustules is itself suspicious, and still more so if they are found in the situations named. To make the diagnosis absolute, it is necessary to see the furrows above described either perfect or torn open. The existence of vesicles between the fingers with small papules on the anterior aspect of the forearm, and a few cracks on the front of the wrist, may be taken as *almost* absolute proof of scabies. Pustules on a child's nates, with vesicles on its feet, would be almost positive proof of its existence. If, however, the characteristic furrows cannot be seen between the fingers, on the wrists, on the penis, on the mammæ, or elsewhere, the proof is not absolute, but the probability of its existence may be very strong, and treatment will then generally clear up the matter. As an aid to diagnosis, a history of contagion will often be afforded on inquiry; if the disease is not recent, the fact that no other persons with whom the patient has been brought into close relationship have suffered in a similar way would be opposed to the probability of scabies. It is very seldom that a furrow cannot be found unless the case have been subjected to treatment. It will sometimes be very difficult to decide in a case of *eczema* occurring between the toes or fingers, or in the front of the wrist, whether this is a pure uncomplicated disease, or if it is *eczema* due to the irritation of the *acarus scabiei*. The rest of the body must be carefully examined, and the history inquired into as to contagion; but if nothing distinctive can be discovered, and the parts affected be much cracked and the cuticle under-

mined, it will be well to try the application of sulphur ointment, and this will often effect a cure when the remedies for simple eczema have entirely failed.

*Pruriginous strophulus* in children often presents a *primæ facie* resemblance to scabies. On close examination, however, it will be found that that disease is essentially papular, and interspersed with the papules are not unfrequently erythematous spots and wheals. The papules and wheals arise more suddenly, and are accompanied by more intolerable itching, especially in the daytime, than scabies; they do not occur so much on the aspect of flexion as on that of extension and posteriorly; the back, thighs, and arms are the parts most frequently affected. From the scratching, pustules are not unfrequently formed, and some of the papules may secrete clear fluid, so as to become vesicles. The skin is more rough to the touch, and the papules are larger and more elevated; the cuticle is not cracked and undermined as it is in a severe case of chronic scabies. If sulphur is applied to this disease, the symptoms are much aggravated.

¶ In *prurigo*, again, it is not always easy to say whether the prurigo is due to scabies, or of independent origin. It will be necessary to look for the other signs of scabies in parts not attacked by simple prurigo. If the abdomen and the inner parts of the thighs be chiefly attacked, the case is very probably due to scabies; if the neck and shoulders are the only parts attacked, the case is probably not due to scabies, but to the *pediculus corporis*. In scabies the papules are usually smaller, and the crust lighter colored, from an admixture of serum.

*Treatment.*—Sulphur is the best remedy for scabies. It cures by destroying the *acarus scabiei*. At the Hospital St. Louis, in Paris, the disease is now usually cured in two hours. Common soft soap is rubbed into the body for twenty-five minutes, then a simple warm-bath for fifty minutes, which is

followed by a general friction with a sulpho-alkaline ointment, containing twelve parts lard, two parts sulphur, and one part carbonate of potash. The ointment is not washed off for two or three days, and then warm baths are allowed. The clothes are disinfected by fumigation with sulphur, or by heat above 180°. The combination of an alkali with the sulphur dissolves the cuticle, which is previously softened and sodden, and insures the destruction of the sarcoptes. It is very useful in patients with very thick, hard cuticle, but it sometimes occasions a considerable amount of irritation in children, females, and persons with very tender skin, and in such patients is not necessary. In order to insure the complete cure of scabies within a very short time, the friction with sulphur must be general, and not limited to parts that are the seat of eruption, otherwise some of the parasites will escape and keep up the disease.

The disease may always be got rid of by vigorous frictions with the simple sulphur ointment on the affected parts. The clothes, however, must be disinfected, otherwise the disease will return. In some cases it may be important to conceal the color and smell of sulphur, which may be effected by the essences of bergamot and lemon, and cochineal. Another compound of sulphur has been recommended by Vlemineckx, and much used in Belgium. It is a solution of sulphuret of calcium; it is thus prepared: two ounces of sulphur, one ounce of quicklime, in sixteen ounces of water, are heated to the boiling point, being constantly stirred and kept boiling till combination has occurred. It is then filtered, and about ten ounces of fluid are obtained. This may be used undiluted for those with hard and thick cuticle, or diluted with glycerine in different proportions according to the tenderness of the skin of the patient. By rubbing this in for half-an-hour it is said a cure may be effected. Where sulphur cannot be used from any cause, a warm bath contain-

ing two or three drachms of bichloride of mercury for an hour daily may be used. M. Devergie says a cure will be effected in five or six days. An ointment of iodide of potassium is also recommended. Where there is much inflammation and ulceration attending scabies, it may be advisable to introduce the treatment by a much milder preparation of sulphur, or even by poulticing the inflamed parts for a day or so. Benzine has been recommended as a very effectual application for curing scabies. In pustular scabies, steel wine with an occasional aperient will do good.

*Causes.*—Scabies is never spontaneous, it always originates from contagion. It may be always cured by local treatment. Mr. Hunt has stated that scabies may be kept up by want of variety in the food and of exercise in the open air. It is quite certain that without acari there can be no scabies, and by destroying all the acari scabies can always be cured. The acarus may be propagated more readily and cause more irritation in certain conditions of health than in others. In the Central London District Schools at Hanwell, with more than a thousand children, there were, two years and a half ago, five hundred cases of itch; at this time my friend, Dr. Coster, was appointed resident surgeon. Within eighteen months all the itch was eradicated by local treatment only, and for the past twelve months there have never been more than two or three cases of itch at one time, and these have been always imported from other schools. They have been at once treated with sulphurous applications, and kept away from other children for a few days until they are cured. There has been no change in the diet or the habits of the children. The surgeon examines them all closely as they come out of a bath twice a week, and in this way the slightest indications of disease are detected and brought under treatment. Dr. Coster

has almost eradicated ringworm, which prevailed very largely also in a similar manner, by local treatment only.

Mr. Wilson states that scabies is more prevalent amongst the middle and upper classes than it was a few years ago, and considers that the increase is "attributable to the introduction of the disease into this country and into a better class of society by the return of the army from the Crimea. Previously to this event, scabies was almost unknown in England, even in our poor-houses." Mr. Wilson may be partly correct as to the greater prevalence of the disease of late years, though this he appears to have over-estimated, and I cannot think that the return of the army from the Crimea has had anything to do with it. I have examined the medical and surgical history of the war with Russia by the Director-General, and find that, out of 60,399 cases in the military hospitals, there were only 185 cases of scabies. I have also, through the kindness of Dr. Parkes, heard from a staff surgeon in charge of a division who "saw no scabies during the whole war;" from another surgeon in charge of a regiment during the whole war "who saw not one case of the disease;" and from an assistant-surgeon who was at Scutari in the first year, and in the Crimea with his regiment afterwards, who says that scabies was most uncommon. At the hospital at Renkioi, with 330 patients, there was not one case of scabies.

From these facts it appears quite certain that we must look elsewhere for an explanation of the increased frequency of the disease. That the disease was "almost unknown in the poor-houses of England" ten years ago, is not at all consistent with statements which I have heard by different surgeons who had the charge of workhouses at that period.

There is a variety of scabies known as Norwegian itch. It has been seen rarely in other parts of Europe. It is a very aggravated form of true scabies, not depending on the

presence of a different species of *acarus*, as at first supposed. The peculiarity of this variety consists in the formation, upon larger or smaller spaces of the body, of yellowish dingy white, scaly crusts from a line to an inch thick, or of greenish callous masses (epidermal swellings), which are seen even on the face. The crusts can be removed by baths, when the skin is seen to be red, and the crusts are speedily re-formed. The nails sometimes become uneven, yellowish-brown; and cartilaginous; and the hair comes off on removal of the crusts from the scalp. The crusts are found to be made up of epidermic cells, *acari*, their eggs and excrement, and some plastic lymph. The *acari* have not burrowed in the ordinary way, so that no cuniculi are seen.

This form of the disease seems to be induced by an unhealthy condition of skin, due either to neglect or to endemic causes. It occurs side by side with ordinary scabies. A case of this variety is reported by Sir Henry Cooper<sup>1</sup> as occurring in a child, several members of whose family had scabies in its ordinary form.

### DISEASES DUE TO VEGETABLE PARASITES, OR EPIPHYTES.

These are *favus* or *tinea favosa*, *tinea tonsurans*, *herpes tonsurans* or ringworm, *tinea decalvans* or alopecia areata, *mentagra* or *sycosis*, *pityriasis versicolor*, and *madura foot*.

#### FAVUS.

(Neligan's Atlas, Pl. XV., Figs. 2, 3; and Pl. XVI., Figs. 5, 6.)

*Favus*.—(*Tinea favosa*. *Porrigo lupinosa* or *vera*. *Honeycomb ringworm*. German *erbgrind*, *honigwabengrind*.)—This disease is a comparatively rare one in England, but more common on the Continent and in Scotland. There is no

<sup>1</sup> Medical Times and Gazette, August, 1861.

drawing of it in Bateman's Atlas. What Willan and Bateman called *porrigo favosa* was a form of impetigo. The name which they gave to favus was *porrigo lupinosa*. This use of the term *porrigo favosa* has led to confusion in the minds of many English writers.

It is a disease fostered by filth and poverty; and is seldom or never met with amongst persons of cleanly habits.

The word *tinea*<sup>1</sup> is a convenient one to designate a class of skin affections having certain common characters. They are contagious, affect the hair, and tend to produce baldness; they are chronic in their course, and have not much tendency to spontaneous cure. They essentially depend on the presence of microscopic fungi, which grow in the epidermis and the hair.

The diseases which are placed in this category are *tinea favosa* or favus, *tinea tonsurans* *porrigo scutulata* of Willan or ringworm, and *tinea decalvans* or alopecia areata. Some writers include *mentagra* under the name *tinea sycosis*.

*Tinea favosa*, or true favus, is characterized by sulphur-colored, dry incrustations, of varying thickness, sometimes disposed in the form of cups, and sometimes in a more irregular manner. The sulphur-colored crusts have a peculiar mouldy odor, somewhat resembling mice. It occurs on any part of the skin on which hairs are found, but its favorite seat is the scalp.

The first form of the disease, *disseminated favus*, is the more common, and begins in the following manner. There is an increased production of cuticle round one or more hairs; occasionally there is a small red ring. The hairs thus surrounded lose their glossy character, become dull, and are changed in color. A little later, small yellow concretions of the size of millet-seeds appear attached to the under sur-

<sup>1</sup> From the Latin, meaning moth-worm.

face of the epidermic scale around the hair, and the hairs are more altered, and come out too easily when pulled. At first there is no central depression, but a spherical elevation traversed by a hair; this increases in size, maintaining its circular form, and assuming a central cup-shaped depression. Sometimes this circular body is smooth on its inner aspect, like the cup of an acorn; at other times it is rough, uneven, and presents a series of concentric circular ridges. This cup-shaped mass is an individual favus. The outer layers of the favus, which are those latest formed, are of deeper color than the central ones, which become pale. The separate favi may go on increasing till they measure half an inch in width. After a time the circular form is lost, the outline becomes irregular, and contiguous masses run into each other, and in this way the whole scalp may be invaded ("favus urcéolaire cohérent"). There may be intermingled with this characteristic and peculiar material, spots of blood and pustules. Favus may be complicated with psydriacous pustules ("impetigo"), or with abscesses in the subcutaneous tissue. A head thus diseased is a fertile soil for the production of pediculi, but uncomplicated favus does not appear to foster these creatures more than impetigo. At a later stage, permanent baldness ensues from the destruction of the hair follicle and its papilla; the scalp is then left pale, smooth, shining, and rather hard to the touch.

In the second form of the disease, *favus nummularis* or *scutulatus*, the disease attacks circular patches of hair instead of single hairs. In both forms of the disease, before the characteristic yellow bodies appear, there is some itching of the affected parts, commonly more or less erythema, and an increased formation of epidermis. In this second form the excessive production of epidermic scales is more marked; the hairs, for a short distance up their shafts, are surrounded by them; they are white, and form an adherent network of



a gummy appearance (*favus squamosus*, *tinea furfuracea*). By almost imperceptible gradations with the epidermic cells are intermingled mycelium and spores of the fungus; these will be detected microscopically before the yellow color is apparent. Sometimes the yellow matter may be seen amongst the scales in the form of small points, which remain isolated for a short time, but soon run into each other, and then form circular patches of the parasitic disease. It is very rare to find a single patch of this form of disease; several patches usually occur at the same time. In the *favus nummularis* (or *scutulatus*) the changes in the hair are not so rapid, and baldness does not occur so soon. On the body, where the hairs are not so thickly placed, *favus* always assumes the disseminated form. In both varieties of the disease it is very usual to find on the body small erythematous rings, with all the characters of furfuraceous herpes circinatus, but the circles are of smaller and more uniform size, never exceeding that of a threepenny-piece.

There is yet another form of the disease in which the affected parts have not a circular outline, but are irregular and elongated. It seems as if the parasite in this case developed itself upon the shafts of the hairs, on which it forms for some distance a network uniting them strongly to each other. The tendency of the *favus*-masses, when left to themselves, is to exhaust the parts which they affect by destroying the hair. They themselves are cast off, having previously become dry, of a darker yellow or brownish color, and turned in at the margins until they are gradually enucleated from the matrix on which they were situated. A depressed thinner patch of skin is left of a darkish red color; this soon recovers itself, except on the scalp, where it becomes pale, hard, and dry, covered with a thin, shining cuticle.

In all its forms *favus* is essentially a chronic disease, and, if not properly treated, will last any number of years; it

would seem to be capable of undermining the health. It is doubtful whether the local disease causes the general derangement, or is merely a concomitant or an effect of constitutional malady.

*Causes.*—Filth is the most active predisposing cause. Exposure to contagion is an exciting cause. Mere exposure to contagion is not enough to produce the disease in a large proportion of those who are exposed. The coexistence of contagion and dirty habits does not always induce the disease. I had under my care two brothers who have been the subject of favus for two or three years; and although they belonged to a family of seven children who were kept in a very dirty state, and who used the same towels and brushes, and slept with them, yet no other member of the family contracted the disease. A suitable soil is necessary, as well as the sporules of the plant. Such a soil is not always found on the heads of even dirty children. That it is contagious has, however, been already proved by the results of the inoculation of favus matter, by Bennet, Hebra, Remak, Deffis, and others. Of three cases inoculated by Deffis, a typical favus cup was produced in one, and the epidermic variety of favus in two cases. The crust, when examined by the microscope, exhibited the achorion. The average period of incubation was about forty days. The true favus cups are perhaps only formed when, by inoculation, some of the fungus is brought into contact with a hair follicle.

Dr. Bennet relates his experience as follows:—

“In the summer of 1845, one of the gentleman in attendance at the Royal Dispensary volunteered to permit his arm to be inoculated. A boy aged eight, laboring under the disease, was at the time the subject of lecture, and a portion of crust taken directly from this boy’s head was rubbed upon Mr. M.’s arm, so as to produce erythematous redness, and to raise the epidermis. Portions of the crust were then fastened

on the part by strips of adhesive plaster. The results were regularly examined every Tuesday and Friday. The friction produced considerable soreness, and in a few places superficial suppuration. Three weeks, however, elapsed, and there was no appearance of favus. At this time there still remained on the arm a superficial open sore about the size of a pea, and Mr. M. suggested that a portion of the crust should be fastened directly on the sore. This was done, and the whole covered by a circular piece of adhesive plaster about the size of a crown-piece. In a few days the skin surrounding the inoculated part appeared red, indurated, and covered with epidermic scales. In ten days there were first perceived upon it minute bright yellow spots, which, on examination with a lens, were at once recognized to be spots of favus. On examination with the microscope, a few of the cryptogamic jointed tubes could be perceived. In three days more the yellow spots assumed a distinct cupped shape, perforated by a hair; and, in addition to tubes, numerous sporules could be detected." (Clinical Lectures, 2d ed., p. 799.)

Gruby tried the effects of inoculation on vegetables, and succeeded in getting a favus cup, identical with what grows on the heads of children, on the bark of an oak in full vegetation.

What, then, is the true nature of the disease? It is one of the most striking examples of parasitic disease. The true favus matter is essentially composed of the sporules and mycelium of a fungus which commences to grow in the lower layers of the epidermis, and penetrates the lining of the hair follicles, and, entering the hair, shoots up into its substance. The sporules are oval, having a diameter of about  $\frac{1}{100}$  of an inch; the tubes of mycelium are curved branches, and may be empty or filled with granules, and beaded together end to end. (See Plate I. figs. 1 and 2.)

Favus matter has often been taken for dried pus, which it

sometimes so much resembles that it is difficult to distinguish it by the naked eye from some of the dried crusts of impetigo. It differs in chemical characters, as well as in microscopic appearances. The favus material is not acted on by dilute alkalies, as pus is; nor by alcohol, ether, and chloroform, like the fat of sebaceous cysts. The fungus is named *achorion Schoenleinii*.

*Treatment.*—The main indication is to destroy the plant. The incrustation may be removed by poulticing, or, better still, by the continuous application of a solution of sulphurous acid by means of lint under oiled silk. To destroy the parasitic growth, corrosive sublimate in solution or in ointment, about four or eight grains to the ounce, will do very well, or a strong solution of sulphurous acid, as recommended by Dr. Jenner.

This plan of treatment will get rid of the crusts externally, but it will not eradicate the fungus from the hair follicles. The patient sometimes appears to be quite well, but in a few weeks or months the disease will again show itself, owing to the renewed growth of the plant, sprouting up from the hair follicle and the newly growing hair. When the disease has existed for more than a very short time on the scalp, it is essential, in order to obtain a permanent cure, to *pull out* all the hairs of the affected parts, and for a little distance around them, as well as to use the parasiticide applications. This takes time, but it is not difficult or painful, because the disease loosens the hair in its sac. In this way a disease, formerly most intractable, may now, with comparative ease, be got rid of. It is desirable, though not essential, in most cases to give the patients cod-liver oil, steel medicines, and good living, as they are frequently strumous, and almost always badly nourished. There are two things necessary to the occurrence of the disease—the presence of the sporules of the plant, and a suitable soil; this last seems to be induced

in the epidermis by privation and want of cleanliness. The soil is the epidermis at the orifice of the hair follicle, which is in some way altered before the fungus grows in it. We shall see that the disease next to be described, *tinea tonsurans*, or herpes circinatus, may be complicated with favus; the former disease so modifying the epidemic scales as to make them a favorable nidus for the growth of the favus plant. Favus crust has no connection whatever with tuberculous deposit, as was at one time supposed.

*Case of Favus. Treatment by Epilation.*

J. J., aged ten years, an unhealthy-looking strumous boy. He has light hair and long eyelashes. The affection from which he now suffers has existed three years. He never complained of itching of the head. Over the whole scalp, except round the margins, is a dry sulphur-yellow deposit, with irregular outline, and of nearly uniform thickness, about a line or a line and a half; the hair is matted together, and over the vertex there is an admixture of white and yellow color. There are no patches of complete baldness visible. Slight enlargement of posterior cervical glands. Ears very dirty; no pediculi. No rash on trunk and limbs.

The crusts can be removed by means of forceps, leaving a depressed, smooth, glazed and pink surface, from which clear fluid exudes. The hairs are not many of them loosened in their sacs. Under the microscope the hairs are not found much altered; over some are oval bodies, having all the characters of sporules of *achorion Schoenleinii*. The hair root-sheath is ragged, and has a granular look; there is in many hairs a sharp curve of the hair-bulb upon its shaft. The dry crust from the scalp is found to be made up of epidermic cells with spores and mycelium of a fungus.

January 12, 1864. The scalp is cleared by the use of oil of

tar, one ounce, with iodine, one drachm; and subsequently by iodide of sulphur ointment.

27th. The whole scalp is now free from crusting. There are no bald patches. Most of the scalp is colored pink, and the hair follicles are slightly prominent. Some of the hairs have lost their lustre, and look grayish and thicker than natural. There are a few spots on the head which look pale and less thickly covered with hair than other parts. Extraction of all the hairs on his head by means of a forceps is now ordered, and a lotion of the following composition to be used freely after each operation:—

Hydrargyri bichloridi,  
Ammoniaë muriatis, āā gr. xx.  
Aquaë, ℥v. Misce.

April 8. Epilation has been continued, but not very regularly. The head has been washed every other day with soft soap, and an ointment, containing in the ounce fifteen grains of nitric oxide of mercury, has been applied. The whole scalp is now smooth and dry, with a little erythema in patches. The hairs, few of which have been allowed to grow, look glistening, tapering, and healthy. A few stubby dark hairs are seen, and at once pulled out. Some hairs come out too easily, some have an imperfect bulb, others are surrounded by a loose, very granular epithelium. In one case, distinct mycelium is seen in the epithelium of root-sheath.

May 9. The same treatment. Head now quite smooth, but still disposed to get covered with branny scales.

June 22. The head is now covered with fine light-colored glossy hair. There is but little or no tendency to undue formation of cuticle, and no redness of scalp at any part. He is to present himself every fortnight for inspection, lest there should be any reappearance of disease.

Oct. 20. He has now a fine head of hair, without trace of disease.

*Treatment by Epilation.—Cure.*

A. J., aged four years, brother of J. J. Said to have been always strong till the last six months. Has now been suffering for two years from a disease of the scalp. There are seven children in the family; they are poor and dirty, and have used the same towels, brushes, and combs. Arthur and James are the only two who have any disease of the skin. It began on his head. He once had a similar diseased patch on his shoulder, which got well of itself. He has been under treatment elsewhere, and has had the head several times cleared of crusts, but very speedily to relapse into the same state. Itching has not been a marked symptom until quite lately. There are now on the head some thick, irregularly-shaped, uneven, mortary, yellow deposits. One large mass has a circular outline, and there are several small isolated masses, with circular outline, but not umbilicated.

He came under treatment on Oct. 16, 1863. A sulphurous acid lotion kept constantly applied. Oleum juniperi pyroxylicum (huile de cade) applied to part of the scalp previously to epilation.

October 21. Epilation begun. An ointment, containing in the ounce six grains of corrosive sublimate, to be used. Internally, cod-liver oil and iodide of iron.

November 4. About one-third of scalp epilated.

21st. About half of scalp epilated; the bald portion covered with very small vesico-pustules; the rest of scalp free from crusts, and the hairs have almost a normal appearance. Sulphurous acid lotion has been kept constantly to the head. Some small erythematous furfuraceous rings on body. Omit lotion.

Dec. 24. About four-fifths of head cleared. A tendency

to excessive formation of epidermis where the operation has been performed.

Jan. 3. A few distinct umbilicated favi in front of head. There is more soreness and tendency to serous exudation at the back of head. The oleum juniperi pyroxylicum to be applied for two or three days.

27th. Made an out-patient. There is no roughness on scalp. In one or two places the scalp is reddened. There are straggling hairs growing all over the head, which look fine and glistening. To apply iodide of sulphur, ten grains to the ounce of lard, and continue internal medicines.

Feb. 10. The head generally smooth; a few patches reddened, which show a tendency to excessive production of epidermis, especially around the hairs as they emerge from their follicles; some hairs still too loose in their sacs, and root-sheaths thickened; epidermic cells more granular than in health.

21st. A few small favi appearing in left parietal region; some of the hairs thickened and broken off short; some spores detected in epidermis around the lower part of shaft of hair; the hair frequently makes a sharp curve just as it emerges from the follicle; some of the hairs, which are very opaque, have a fibrous fracture, like the hairs of *tinea tonsurans*.

March 10. Has been at home, where he is much neglected; some of the hairs loose; a number of red patches and dry scales; under the microscope many of the hairs are bent on themselves at an acute angle near the bulb; the epidermic cells of the root-sheath very granular; here and there a spore or mycelial thread is seen in root-sheath, or in the loose epidermic scales near the commencement of hair-shaft.

April 20. Head covered with almost healthy hair; a tendency to formation of dry scales; no fungus detected by microscope. To be kept washed with soft soap and oiled.



May 12. Some distinct favi on left temporal region.

21st. The hair over nearly the whole head looks healthy; the scalp is in places covered with fine white scales; here and there a sulphur-colored umbilicated favus is seen.

June 27. The scalp has once more been epilated over its entire extent, and a lotion of bichloride of mercury, four grains to the ounce, rubbed in after each epilation. The head is now bald, smooth, and of natural color. It is to be kept well oiled and watched. If any signs of disease show themselves, the hairs so affected will be pulled out.

November, 1864. He is now quite well.

*Remarks.*—It is worthy of note, that out of seven children in a family, all poor and dirty, living together, only two contracted this disease, showing that, although it is a contagious malady, yet many persons are not readily susceptible of it, even though they are dirty in their habits and live badly. In the Children's Hospital, where I have had cases under treatment for many months, there has been only one case of contagion, and this was at once cured. There was a difference in the course of the two cases just reported, one being more superficial, spreading mainly in the epidermis, and not rapidly extending to the hair follicles so as to cause baldness; the other forming more distinct favi, depressed in the centre, loosening the hairs, and more rapidly inducing baldness.

*Favus.—Cure without epilation.*

J. B. D., aged two years and a-half. He has usually had good health. He is the eighth in a family of nine children, of whom five only are living. About two months before he came to the hospital he had a small pimple on the top of his head, which soon broke out into a scab; his mother was advised to use white precipitate ointment, which removed the crust, but others very speedily formed, until his whole head was covered. On admission, the child's general health ap-

peared good. The scalp was covered with a dirty brownish-yellow material, looking like an admixture of dry and amorphous favus, with dried crusts of impetigo. The smell from it resembled that of white mice. There was but little hair on the head, and this was so matted down that it could be scarcely seen. A few of the dried crusts had a sulphur-yellow tint, but none of them were cupulated. When examined by the microscope they were found to consist of epidermic cells, with numerous oval bodies, insoluble in liquor potassæ and ether; some detached, and others adherent to each other, end to end. They had the characters of sporules of *achorion Schoenleinii*; no mycelium was observed. The bulbous ends of the hair were thick and very opaque; some of them studded with clusters of sporules. About the neck and upper part of the trunk were numerous small scaly patches, varying in size from a pin's head to a split pea in diameter, very much like desquamation after scarlatina.

June 1st, 1863. A lotion, containing in four parts of water one part of a saturated solution of sulphurous acid, is to be kept constantly applied to the head on lint under oiled-silk.

11th. The dry incrustation has been softened, and in great measure removed, leaving the scalp bald in patches, and of a pink color. A few isolated yellow crusts are seen, but not cupulated; on removing them with the finger-nail, the subjacent surface is depressed, and much redder than the surrounding skin. When the crusts are removed, the hair comes out by the roots. There is eczema behind the ears, also of the nose and upper lip. Appetite is bad.

12th. A mixture containing quinine is given; an ointment applied containing sulphur and white precipitate.

17th. Steel wine substituted for the quinine. The scalp is cleansed from ointment and crust by benzole on lint. The sulphurous acid lotion to be freely applied, as at first. The hair under this treatment began to grow quite vigorously,

and the patient was in a state of weakness. In about a month he was well.

The patient was not very well when he had a second attack of the disease. He was in a state of weakness and the disease was not so severe as the first.

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smaller ones a fine hair emerged. Most of the crusts could be removed by means of a forceps without making the part bleed, but leaving a depressed reddened surface; cutis with a very thin layer of cuticle. On the lower limb were crusts of the same character, varying in size from that of a pin's head to two inches in diameter. The child's general health was moderately good. There was no history of contagion, though she had associated freely with other children. In this case the surface of the body and of the limbs was cured by sulphurous acid lotions only; and the scalp by two or three general epilations, each followed by parasiticide applications. There was no formation of pus, but a rapid growth of fungus with an excess of cuticle. No permanent baldness was left.

In a case now under treatment there is complete destruction of the hair-sacs at the vertex, leaving the scalp pale and tense, as if bound firmly to the subjacent tissue.

#### TINEA TONSURANS.

This, unlike the preceding, is a common disease in this country. It occurs amongst the rich as well as the poor; and it is seen not uncommonly in the lower animals, whilst favus is rare in them. It has many points of analogy with favus; like it, the disease cannot exist without the presence of a parasitic growth; like favus, it is contagious, but will not occur in every person exposed to the contagion; like favus, it is a chronic disease, its most intractable symptoms being dependent on the changes effected by the plant in the hairs, and the parts concerned in their formation; like favus, it may occur on the body or limbs as well as on the scalp, but is most difficult of cure when it attacks the hairy scalp. Unlike favus, it is not restricted to the poor, but is found in every rank of society. It was called by Willan and Bateman *porrigo scutulata*, and is very fairly portrayed in Bateman's

plates, by Cazenave, herpes tonsdens; by Mr. Wilson, trichonosis or trichosis furfuracea; by Malmsten, trichophyton or trichomyces tonsurans; and by Gruby, rhizo-phytoalopecia; popularly it is called ringworm.

In a case of tinea tonsurans that has existed some time, there are certain portions of the scalp on which the hairs are clipped short off at about an eighth of an inch from the surface. The broken hairs are shorter, thicker, and more dull-looking than the healthy hairs; some of them are twisted or bent at an angle. The patches thus shorn have usually more or less of a circular outline, and may vary in size from half an inch or less to several inches in diameter. The skin in these parts is slightly altered in color, having rather a slaty tinge. On the surface of the patch there are usually small opaque white scales, and often the orifice of each hair follicle is encircled by a fringe of fine white scales. The hair follicles themselves soon become too prominent, and the skin has an appearance similar to that known as "cutis anserina." The patches are slightly elevated above the surrounding skin, and whilst the disease is progressing they are distinctly warmer than the other parts. If an attempt is made to pull out the short broken hairs, they snap off, and do not come out by the roots. In cases still more advanced the hairs are more modified; they are broken off still nearer to the scalp, and nothing is seen but a very small white feathery appearance at the orifice of the follicle.

This is a description of what is found when the disease is well established. It is, however, important to recognize the existence of disease at an earlier stage. The first symptom is a certain amount of *itching*, most felt at night. This varies in degree in different cases. There will be seen at this early period on the surface attacked a slight eruption more or less circular in outline. The eruption may be either (1) mere *erythema*, in the form of a red very slightly-raised ring, or (2)

the eruption may be *vesicular*; hence the name *herpes tonsdens* given to the disease by Cazenave. The vesicles where they exist are very small, close together, and are ruptured very early. They are not at all like true herpetic vesicles, such as are seen in herpes labialis or herpes zoster, but like what is seen on the trunk under the name of herpes circinatus. (3.) The eruption may be *pustular*, a hair projecting from each pustule; this is less common. (4.) It may be *papular*, and the patch will then take the form of lichen circumscrip-tus. (5.) It may be *squamous*. The erythematous form of eruption is most common.

On very close examination, even at this early stage there will be seen a slight change in the hairs. They will be changed from fair or dark to a reddish-yellow or ash-gray color. They will be more or less dull in appearance, and dry, and will be found more brittle, and some will be seen broken off at a few lines from the skin.

M. Bazin asserts that the parasite may destroy the hair bulb and the capsule of the hair follicle, and give rise to pustular inflammation.

The walls of the hair-sac rarely, if ever, become adherent, so as to obliterate the follicle and cause irrecoverable baldness. More commonly a hair is produced, but it is rough, yellowish, and very slender, without capsule, and there is no distinction of cortex and medulla; the whole structure is homogenous.

If a hair from a patch of *tinea tonsurans* well established is placed with a little water under a microscope with a magnifying power of about three hundred diameters, the hair exhibits none of the ordinary fibrous arrangement of a healthy hair, and is studded all over with roundish globules, varying in size from  $\frac{1}{1000}$  to  $\frac{1}{500}$  of an inch; the hair is opaque, nearly twice its natural size, and is split up at the ends so as to resemble the end of a bundle of sticks broken

off at different lengths. The fine scales on the surface of the scalp or fringing the hairs, will be found under the microscope to be a mixture of epidermic scales, and the sporules and mycelium of the fungus. To render the epidermis more transparent, the use of a little diluted liquor potassæ is desirable. These globules are insoluble in chloroform and ether, thus excluding the possibility of confounding oil globules with the vegetable sporules; they are insoluble also in alkalis. The parasite found in this disease has received the name *trichophyton tonsurans*. See Plate I., figs. 3 and 4.

We saw above that *tinea favosa* may exist on any part of the body on which there are hairs, as well as on the scalp. The same thing is true of *tinea tonsurans*. On children affected with *tinea tonsurans* of the head there are constantly to be seen small rings on the trunk or extremities, called *herpes circinatus*. This is generally admitted to be the same disease, its differences being due to its attacking parts on which the hairs are downy and do not afford the parasite much soil on which to grow. There is a form of *herpes* proper, in which vesicles, presenting the usual characters of those seen in *herpes phlyctenodes*, are arranged in a circular manner. The vesicles are preceded by redness, are of moderate size; their contents, at first clear, soon become turbid; they are not ruptured for two or three days, and they then dry up into a brown scab. This is not the form of disease seen in connection with *tinea tonsurans*. In the affection, which I propose to call *tinea tonsurans* or ringworm of the body, the vesicles are very small, extremely evanescent, and do not usually leave a brown crust, but simple desquamation. In some cases no vesicles are found at all, but there is simply a round erythematous patch, followed by branny desquamation, looking much more like *pityriasis* than *herpes*. In other cases the eruption is distinctly papular, and more like a case of *lichen circinatus*.

The diameter of the circles may vary from one-sixth of an

inch to two inches. At first there is a small red spot, which gradually extends in circumference, whilst the centre recovers its normal condition. Occasionally the central portion does not recover itself, but remains scaly, so that instead of a ring of ruptured vesicles or scales, there is a circular patch all covered with minute scales. This affection is purely local, and occurs without any constitutional disturbance; it is much more common in children than in adults. The only cases in which you will find it in adults are persons engaged in waiting upon or nursing children affected with tinea tonsurans. In such persons it is not unusual to find tinea tonsurans of the arms and hands. Tinea tonsurans of the scalp is seldom, if ever, met with in adults.

M. Bazin, however, maintains that *sycosis* or *mentagra* (a disease presently to be described, which affects the beard and whiskers of men), is really the same disease as tinea tonsurans, due to the same parasitic growth, which produces different morbid effects from the difference of soil.

If from a circle of ringworm of the surface of the body, scales are scraped off and moistened with a dilute solution of potash or ammonia, there will usually be seen, on microscopical examination, a number of round sporular bodies and filamentous particles infiltrating the epidermic cells; the fine hairs will also be seen studded with similar sporules, and are usually broken off with a fibrous fracture. See Plate II., fig. 1.

Occasionally, but very rarely, the sporules of the fungus are not found in the scales of tinea tonsurans of the surface. "Herpes circinatus," so called, may be caused by the contagion of tinea tonsurans, and the converse is also true, that tinea tonsurans may be caused by the contagion of "herpes circinatus."

About three months ago, a little girl was brought to me, with the following history: She was about seven years of



age, and had been staying at Hastings. Two months before I saw her, a small, round, red spot was observed below her left eye; it became covered with thin scales, it spread in a circular form, and after a time got quite well, leaving at the time I saw her a small red stain. Since the first spot, one or two other small round spots had appeared on the cheek and got well, and when I saw her there was a patch on her chin an inch in diameter, with raised edges, and branny scales on the raised portions. A few weeks after the spot was seen on her cheek she began to complain of itching of the head on the left side, and it was noticed that the hair came off in that locality, and the scalp was here a little rough, and darker in color than in other parts. Great pains had been taken to keep the head clean, but no medicated applications had been used. On a close examination of the left side of the head, it was seen that the scalp above the left ear was pink, slightly rough, some of the hairs were broken off short, and the stumps thickened, more opaque, and darker in color than the rest of the hair. In this case there was ringworm of the face existing for some time, and then, after a while, *tinea tonsurans* developed in the scalp. I may mention here a point which it is well to remember, that "*herpes circinatus*" will very often get well spontaneously, but *tinea tonsurans* seldom does. The brother of this little girl, aged nine years, came with her to show me a small ring at the back of his neck which had existed about a week only. This was a spot of ringworm about the size of a sixpenny piece. He had no affection of the scalp.

*Treatment.*—In "*herpes circinatus*," or ringworm of the surface, simple measures usually succeed at once; a solution of nitrate of silver, a drachm to the ounce, acetum cantharidis, or strong acetic acid, will suffice. The treatment of *tinea tonsurans* in the hairy scalp is commonly much more tedious. In this disease, as in favus, the chief indication is

to destroy the parasitic plant. It might be supposed that this is very easy, inasmuch as there are many known substances which destroy every form of vegetable life. If, then, the disease cannot continue without the parasite, wherein lies the difficulty of getting rid of it? So long as the fungus is external it can readily be reached; but in this disease it spreads down into the walls of the hair follicle, and attacks the epidermis there, as well as the hair bulb and the portion of hair within the sac. At the very outset of the complaint, before the deep-seated parts are much involved, a cure may be effected more quickly than at a later period. The best way to treat it then, is to apply blistering fluid, which loosens the epidermis, and then to apply sulphur ointment containing forty grains of ammonio-chloride of mercury to the ounce; or bichloride of mercury, ten grains to the ounce of lard. The scalp should be frequently washed, in order to get rid of detached epidermis and masses of the fungus growth which is present in the form of minute scales, and also infiltrates the broken hairs and epidermic scales. The ointment should be applied twice a day. This mode of treatment will generally effect a cure in the course of two or three months, or in a shorter time if the case be brought under treatment early. Sometimes cases occur which are unusually obstinate, and the head gets into a very rough, harsh condition, the hair follicles being prominent, the hairs broken off short, the intermediate skin of a grayish slate color, and covered with branny scales. There is no doubt that the secretion of the hair follicles in some children is more favorable to the growth of the plant than in others; in strumous children more than in healthy ones. On this account the internal administration of cod-liver oil and tonics is often of service in hastening a cure. There was a boy not long since in the hospital, in whom the disease had assumed an aggravated form, and had existed three years,

not having been properly treated; his brothers and sisters had had the same disease, they had been treated in the same way as himself, and had all got well; but this boy was cured after three or four months' treatment. In some cases a distilled oil of tar, with one drachm of iodine dissolved in an ounce of it, is a useful application. Hebra states that the disease may be cured by a continuous use of soft soap for about a fortnight.

M. Bazin advocates in this disease, as in favus, the extraction of all the hairs on the affected parts, and the subsequent use of parasiticide lotions or ointments.

This plan would answer very well if it were possible to extract the hairs by their roots, but owing to their morbid brittleness this is not practicable, certainly at first. M. Bazin, however, employs persons specially trained to the work, and although they fail the first, second, or third time to extract the roots of the hairs, yet, as the disease is reduced in amount, and the hairs become less brittle, they succeed, he says, at length in extracting them in their entirety. If every other plan fail, this method may be resorted to. It is one, however, requiring great patience. It is not so painful as might be supposed; the sensibility of the scalp may be reduced by the previous use of "huile de cade," or, as it is called in English, the pyroligneous oil of juniper.

#### ALOPECIA AREATA, OR TINEA DECALVANS.

This form of tinea differs from the two preceding in several important respects. By those who do not believe in its parasitic nature it is called *Alopecia circumscripta*, or *areata*; and this name gives a good notion of the main symptom of the disease, without involving any theory as to its essential nature. The peculiarity of the disease is that it causes perfectly smooth bald patches, with a more or less circular outline; there is no scaling of the skin, or but very little; no

change of color, unless the skin be a little paler than the rest of the scalp. The patches may be not more than a few lines in diameter, or they may be several inches. In some cases the disease will spread rapidly over the whole scalp, or even the entire surface of the body and limbs, leaving the patient absolutely destitute of hairs.

If the head is examined at the margins of the bald patch, when the disease is progressing, it will be found that the bulbs of the hairs are reduced in size, some being of the same size as the shaft, and some reduced to a mere point. From this cause they come out by the roots on the least traction. Sometimes there will be found, it is said, a fine grayish down round the hairs previous to their falling out; this I have never seen. If the hairs are examined microscopically, there may be sometimes seen at intervals, on the shaft of the hair, not far from the scalp, small groups of minute round cells, which are the sporules of a fungus.<sup>1</sup> The stem itself presents slight oval dilatations, composed of the longitudinal fibres spread out; across these dilated portions, clusters of sporules may be seen. In the intervals of these dilatations frequently the hairs do not appear unsound, at other times sporules may be seen scattered over the shaft of the hair. Occasionally a hair presents, at its *broken end*, an irregular fibrous fracture like the ends of a bundle of faggots, but not to the same degree as is commonly seen in *tinea tonsurans*. This broken extremity is often more opaque than the rest of the hair. The sporules of the fungus in this disease are stated to be smaller than in the other two, and much less readily detected. They are seldom larger than  $\frac{1}{80000}$  of an inch, and may be as small as  $\frac{1}{250000}$  of an inch. The filaments of the fungus are said to be more numerous than in the other cases, but very fine, from  $\frac{1}{120000}$  to  $\frac{1}{80000}$  of an inch in diameter.

<sup>1</sup> This fungus has been called *Microsporon Audouini*.

This description is mainly founded on the statements of M. Bazin, but does not quite accord with my own observations. When the disease is not progressing, there is nothing left but the bald patch or patches; the orifices of the hair follicles can be just seen, but they are not at all raised, and the hair-sac is empty. In this stage of the disease no traces of the fungus will be found. Occasionally there are scattered over the patch some very short slender downy hairs, and as the disease subsides these hairs become stronger, larger, and more numerous, until after a time they resume the condition of healthy hairs. They are sometimes white at first, and usually of a lighter color than the rest of the hair. This affection is seldom transmitted from one patient to another, although cases are recorded in which such transmission has occurred. It is certainly less contagious than the other two diseases, and most authorities in this country deny that it is ever contagious. Mr. Hutchinson has quoted cases which go to prove that it is sometimes contagious.<sup>1</sup>

The following history, which came within my own observation, is interesting in relation to this question: In a large parochial school, containing eleven hundred children of both sexes, and from six months to fourteen years of age, a number of the children were found all at once to have on their heads patches of baldness quite smooth and pale. The patches varied in size from that of a fourpenny-piece to an inch or more in diameter. On some children there was but one bald spot, on others two or three. Most of the patches were rounded in outline, but some were more irregular in shape. The number of children affected was forty-three, and they were all girls, from seven to fourteen years of age, who lived together. There was no case of the same kind amongst the infants or amongst the boys, who occupied a separate part

<sup>1</sup> Pathol. Soc. Transactions, vol. xiii. p. 266.

of the building. On more careful inquiry, it was ascertained that one girl had been suffering from this disease of the scalp, in an aggravated form, for one or two months, and had been allowed freely to associate with the others.

On the 30th of April one of the attendants observed that another child had a bald spot on her head, and called the attention of the doctor to it. This led to an examination of all the children's heads, when it was found that between thirty and forty girls were affected in the same way. In the course of the following week five or six fresh cases were noticed, but after that period none were found.

On observing the patches closely, they were seen to be of the same color as the rest of the scalp, and perfectly smooth. Immediately around the bald part the hairs came out too easily, and were seen to have scarcely any bulbous enlargement. In many cases, at the very edge of the denuded patch could be seen a few short hairs, about the sixth of an inch long, which were thicker at the free extremity than at the part near the follicle, but not opaque or darker in color than the other hairs. The hairs, examined microscopically, were found to be atrophied at their bulbous extremity. The short club-shaped hairs just mentioned were found to have a tapering bulb, and a thickened free end, which was more opaque than the rest of the shaft, and exhibited a cluster of fibres radiating outwards in a brush-like manner, such as I have constantly seen in examining the hairs from patches of alopecia areata. The structure of these short hairs was quite normal, except at their free ends. In the root-sheaths of two or three hairs I found a number of oval and quadrangular cells placed end to end, or clustering together, looking like vegetable spores. See Plate II., fig. 2. They were insoluble in liquor potassæ, ether, and strong sulphuric acid. These spore-like bodies were about the  $\frac{1}{32}$  of an inch in diameter, in this respect much exceeding the size commonly assigned

to the parasitic spores in this disease. The size of spores is, however, a point to which importance must not be attached, as it varies much under different conditions. There were also on one of the hairs what appeared to be the mycelium of a fungus. The amount of parasitic growth was altogether very small.

This outbreak at Hanwell school appears to me to prove its contagious nature. Except on this supposition, it is not easy to understand why the only children attacked were those occupying that part of the building in which there had been a girl suffering from the same affection for some time previously. There were in other parts of the house, younger girls and boys of the same ages, of similar constitution, having the same diet, and in every respect similarly treated. If the outbreak had depended on atmospheric causes, on the constitution of the patients, or on the diet or general management of the school, the boys and infants should have suffered equally with the elder girls.

I have been occasionally consulted on the question, whether it is safe to admit a child suffering from this form of tinea into a public school. In such cases I have said, that there was no risk of its spreading; but I confess that the history of this outbreak in the school at Hanwell will make me more cautious in future as to such a statement.

#### *Case of Universal Alopecia.*

R. H., aged 33, a native of Edinburgh, has always enjoyed good health. Without any obvious cause, about three years ago a bald spot appeared on the back of the scalp, which was soon succeeded by others of the same kind. The baldness soon extended over the whole head, and since then has spread to every part of his body; he had bushy whiskers, but every trace of them has disappeared; he has no hair now on the pubes, in his axillæ, or in any of the usual situations, with

the following exceptions. (He seems to know every hair on his body, so few and precious are they.) There is one strong hair at the nape, one downy hair on the cheek, one on his pubes, a little fine down on the pinnæ, and the eye-lashes remain. This loss of hair was not preceded by any itching or roughness of the skin. The whole skin, both before and since, has seemed perfectly healthy, perspiring freely and feeling perfectly comfortable, except that he misses the hair from his head. He once had a small sore on his penis, which soon healed, and was not followed by any swelling of the glands, sore throat, or other sign of constitutional syphilis. He is not aware that any member of his family was ever affected in the same way.

On examining the downy hairs from the external ears under the microscope, it is found that some of them are normal in appearance; others have their bulbs atrophied, but are otherwise normal. The hair from the cheek is slightly split longitudinally, and the bulb is reduced in size and bent on the shaft at an acute angle as seen in the accompanying figure, Plate II., fig. 5.

*Nature of the Disease.*—Is the fungus an essential part of *tinea decalvans*, or only a result of the atrophied condition of the hair? I believe the latter, because, if it were an essential part, the fungus would be more constantly found than it is. Its contagiousness is an argument in the other direction.

*Treatment.*—Tonics are generally indicated; arsenic is also of service; local stimulation is, however, most important. Tincture of iodine is recommended by Dr. Jenner to be used twice a day. Frequent washing of the head with cold water, and good rubbing afterwards, and the use of stimulant applications, such as equal parts of olive oil and tincture of cantharides, are, I believe, the best means when the disease is fully established and does not appear to be advancing. Occasional blistering is useful. It is always a chronic com-



plaint, but one in which a cure may be promised, though not a rapid one. The earlier the case comes under treatment, the more speedy will be the cure. Baldness, however, is seldom permanent, though it may last for years. Where it occurs in persons advanced in years, and is diffused over the body, permanent baldness may be caused.

The *diagnosis* of this form of disease is not difficult. The *smoothness* of the surface, the absence of hairs, or, if they are present, their downy nature, and light color, with little or no bulb at their lower extremities, distinguish it from *tinea tonsurans*, in which the hairs are thickened, more opaque, and exceedingly brittle. The baldness which occurs from syphilis, or from a severe illness, differs from that caused by *tinea decalvans*, inasmuch as the hairs do not entirely come off in a circumscribed spot, leaving the rest of the scalp but intact: there is a general thinning of the hair. Senile baldness may be distinguished by its regularity and the situations in which it occurs, commencing on the vertex and extending forwards and to the sides.

### MENTAGRA, OR SYCOSIS, OR TINEA SYCOSIS,

(Neligan's Atlas. PL. XV., Fig. 1, and PL. XVI., Fig. 4.)

Is a disease of the beard, moustache, whiskers, and of the hair within the nostril, which is said to depend on the growth of a fungus which finds a nidus between the root of the hair and the wall of its follicle. By some French observers it is said to depend on the same fungus as is met with in *tinea tonsurans*: the different results produced by the fungus in the two diseases are supposed to depend on the difference in structure of the tissues in the parts attacked. The fungus has received a separate name, "*microsporon mentagrophytes*." The growth of it causes thickening and induration of the tissues around the hair follicle, and suppuration of the follicle itself. From the centre of each pustule a hair will

be found to emerge. After a time the parts affected become much swollen, and sometimes large red round tubercles are produced; at other times pustules appear, either isolated or running into each other, and covered with thick crusts which mat the hairs together. The crusts may be separated, and then fungous prominent ulcerations are exposed to view. In severe cases the subcutaneous tissues are involved, abscesses are formed, and the submaxillary glands may suppurate. The hairs after a time lose their adhesion to the hair follicles, and fall out very readily.

This disease is not nearly so common in England as in France, where the practice of going to the barber to be shaved is much more common than here. It seems likely that the disease is often propagated from one to another by the use of a dirty razor.

MM. Bazin and Hardy, who have paid much attention to this malady, state that, at the outset of it, it is usual to see small erythematous circles, having all the characters of herpes circinatus of the furfuraceous variety, and that the hairs become opaque, dry, and brittle, and coated with a white down, exactly as they do on the scalp in tinea tonsurans. I have never had the good fortune to see this. I have frequently questioned patients on this point, and received a negative reply. A common affection in this country, which is often confounded with it, is impetigo sycosiformis menti. In this disease there is not any induration round the pustules, nor great swelling of the tissues, nor do the hairs become altered in structure. In impetigo, too, there is not usually any loss of hair from their becoming loosened in the follicles.

*Treatment.*—If there is much inflammation, warm fomentations and poultices should be first used. The hairs should then be pulled out, a few at a time, and an ointment containing a scruple of white precipitate and 3ss of sulphur in an ounce of lard applied; or a scruple of iodide of sulphur in

an ounce of lard may be used instead. Purgatives and tonics will often be required to improve the general health and the tone of the digestive organs.

### CHLOASMA, OR PITYRIASIS VERSICOLOR.

(Neligan's Atlas, Pl. XI., Fig. 2.)

The merit of discovering the fungus peculiar to this disease is due to Eichstedt (Froriep's Notizen, 39 Band, July—Sept., 1846. The discovery was soon after confirmed by others.

The parasite is very easily found by scraping some of the scales from the skin, and placing them under the microscope after they have been treated with a dilute alkali. See Plate II., fig. 6.

This disease (called in France "teigne pelade") is due to the growth of this parasitic fungus in the epidermic cells, and is characterized by a brownish discoloration of skin, with a roughness from superficial branny desquamation. It is generally accompanied by slight itching, which often precedes the desquamation. This branny exfoliation is always present, but it varies much in amount. Sometimes the patient must be examined closely in order to its detection, at others there is a very abundant separation of scales. The scales consist not only of the debris of epidermic cells, but also to a considerable degree of the parasitic growth. The patches of discoloration are more or less irregular in form, with convex margins; their outline has been compared in some cases to a map representing several continents and many islands. The color varies in different cases from a reddish or a yellowish to a dark brown, "café au lait," or a dead leaf color, or a mixture of several tints; hence the name "versicolor."

The common seat of chloasma is on the trunk, and more frequently on the anterior than on the posterior aspect; it

may occur on the arms and inside the thighs. It is not usual on parts exposed to the air; often on those under a flannel jacket. It is disposed to be chronic, and is liable to relapse when nearly well. It is not accompanied with any derangement of the general health. It is contagious, though not very highly so.

*Causes.*—This affection scarcely ever occurs in children, but in youth and adult age. It is said to attack those of lymphatic temperament more frequently than others. Want of cleanliness favors it. Pregnancy seems to favor its development. The determining cause of this disease is the presence of a vegetable parasite, the “microsporon furfur.” It consists of a network of tubes or filaments with terminal spores. The spores are round; they refract the light strongly, and appear on the field of the microscope with a double outline; they have no granules inside them. In order to see the parasite, a few of the scales should be scraped off and moistened with a little liq. potassæ diluted with two parts of water, and placed under a microscope with a magnifying power of two to four hundred diameters.

The diagnosis of this affection is usually easy when once its characters are known. Occasionally there are discolorations of the skin from other causes, such as syphilis, or some unknown blood state, which bear a close resemblance to pityriasis versicolor; but in these cases there will be no branny desquamation, and the epidermis cannot be scraped off more easily on the colored patches than elsewhere, and under the microscope the epidermic scales will present their normal appearance. (See case reported page 169.)

*Treatment.*—The skin should be washed frequently with soft soap, and then a solution of corrosive sublimate or sulphurous acid applied; baths containing sulphur and free sulphurous acid should also be recommended. Internal treatment is not necessary, though many persons recommend

arsenic to improve the condition of the skin. Perseverance in the local measures recommended will always effect a cure after a short time.

### MADURA FOOT.

This is a peculiar ulcerating tubercular disease of the foot, endemic in India, especially in the Bombay and Madras Presidencies. It is known as "madura-foot," "ulcus grave," or "mycetoma." It involves not only the skin, but all the tissues of the foot, even the bones. It has been shown by Dr. H. V. Carter<sup>1</sup> to depend on the growth of a peculiar fungus, to which Mr. Berkeley has given the name of *Chionophye Carteri*.<sup>2</sup>

<sup>1</sup> Trans. of Med. and Physical Society of Bombay, 1861, p. 104.

<sup>2</sup> The part played in different general diseases by microscopic growths is at present a subject requiring much investigation. The experiments of Schröder in Germany and Pasteur in France, aim at proving that all fermentation and putrefaction depend on the presence of special and different vibriones. This doctrine is extended by others to Zymotic diseases. The statements of Dr. Salisbury, in the American Journal of Medical Sciences for 1862, that measles can be produced by inoculation, and other infection with *straw fungi*, are also of much interest.

## CHAPTER XVIII.

### DISEASES OF THE NAILS AND HAIR.

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#### DISEASES OF THE NAILS.

##### *Congenital Malformations.*

ABSENCE of nails has been occasionally met with.

Supernumerary nails have also been met with, either on supernumerary fingers, or on the last phalanges, which have been doubled.

Patches resembling nails have also been found on parts which are usually without nails.

Nails have also been found out of their normal situation on an adjoining part.

##### *Non-congenital Affections of the Nails.—Atrophy.*

It has been stated that the growth of nails is sometimes interrupted during the repair of a broken limb, and that the same has been observed in paralyzed persons. If, after a whitlow, the bone of the last phalanx is partly or wholly lost, the nail is often reduced in size.

Atrophy of the nails, accompanied with change of structure, is occasionally seen. It is more common in the toes than the fingers; the nails lose their lustre and smoothness, and do not grow. They seem to be made up of layers lying one on the other, the upper being shorter than the under layers; they are in substance dryer and more brittle. By degrees portions are broken off, and in this way the upper, and subse-

quently the under layers are removed. The matrix of the nail assumes by degrees the appearance of the adjoining epidermis, and there is no more nail to be seen. Before the nail is entirely lost, there often remain for a considerable period small irregular fragments near the base of the nail. Sometimes the nail is loosened at the edges, and turned up.

This condition, in its worst form, is most frequently met with in old people; in a lower degree it is sometimes seen in young persons. It has been named *Scabrities Unguium*.

*Hypertrophy*.—Nails, when left to themselves, may attain a great length. Sometimes they become thickened as well as elongated, and occasionally they are much bent.

G. Simon states that they may be found in one of three forms: (a.) The hypertrophied nail may have all the characters of a normal nail magnified. (b.) The enlarged nail may be made up of layers easily separated from each other, as if several nails were laid one on the other. (c.) The thickened nail may have beneath it a brittle material, which when soaked in water has a pappy consistence. This material, of varying thickness, sometimes extends only a short distance, at other times it reaches the base of the nail. Nails thus altered are sometimes very long, and the edges are turned in so as almost to inclose the soft substance.

*Changes of Form of Nails*.—In phthisis the nails sometimes become much curved downwards, so as to resemble claws. In empyema, phthisis, and cyanosis, together with clubbing of the last phalanges, there is occasionally considerable curving of the nails.

Cross furrows are often seen on the nails. It has been suggested that these are due to an irregular growth of the nail from disturbances of health, the thinner portion being formed when the patient is out of health, and the thicker parts in the intervals; this is sometimes seen in psoriasis and other chronic skin diseases.

Longitudinal markings, and other smaller inequalities, are often seen on the nails. Some of these irregularities have been ascribed by Kölliker to impermeability of the capillaries supplying the matrix of the nail. The nails are subject to disease in psoriasis, in impetigo, and in syphilis.

*Onychia maligna* is a term given to a peculiar ulceration commencing about the matrix of the finger-nails. It is met with in children under ten years of age, but it is not very common. It usually has its origin in an injury; the end of the finger swells, and fluid is effused beneath the nail, which loses its natural color and becomes thin and flattened at the

Fig. 8.

*Onychia maligna.*

end, or more rarely curled up laterally. The nail then turns up from its normal attachment, and exposes beneath it a foul and painful ulcer with characteristic fetor; while the finger-end is enlarged, the integuments being hardened, shining, and of a livid red color. The ulceration extends, and the phalanx itself may become necrosed.

*Treatment.*—The nail must be torn out, and the ulcerated surface dressed with black-wash, or a lotion of one or two drachms of liquor potassæ arsenitis to an ounce of water. Chlorate of potash and bark are recommended for internal use.

*Syphilitic onychia* usually attacks the toe-nails, and is often accompanied with ulcerative fissures between the toes. The ulceration is here less extensive, the surrounding swelling



less marked, and the nail is less seriously involved. There are usually other signs of syphilis in the system. Locally, the black wash is to be recommended, and constitutional treatment is also indicated, as in other forms of syphilis.

### DISEASES OF THE HAIR.

The condition of the hair is much affected by the general state of the health; it is more glossy in health than at other times. Mental anxiety has the effect of turning the hair gray.

Loss of hair is often due to febrile diseases, to pityriasis, to syphilis, to parasites, as in *tinea favosa*, *tonsurans*, and *decalvans*, or to old age.

Entire loss of hair over the whole surface sometimes occurs, as is mentioned in the chapter on *tinea decalvans*.

With the cure of pityriasis, syphilis, or the various *tinea*, the hair will usually be regained. Senile baldness may often be warded off by the use of suitable stimulant applications to the head: some of these are given in the appendix.

Pityriasis *pilaris* is an affection of the downy hairs only, not affecting the stronger hairs of the scalp.

### PLICA POLONICA.

This disease (*der weichselzopf* of the Germans) is an affection of the scalp which is endemic in Poland, Livonia, some parts of Russia and Tartary, beyond which countries it is scarcely known.

The real nature of this disease is not yet clearly proved. What is visible to the naked eye is a firm matting together of the hairs, and the presence of a sticky material between them. The matted hair sometimes takes the form of a single long tuft, sometimes of several smaller tufts, and sometimes of an irregular mass forming a kind of cap. The disease is usually confined to the head; but is sometimes met with

on the chin, in the axillæ, and on the pubes. There is pain and great tenderness of the scalp, which bleeds on the slightest touch.

The source from which the sticky material between the hairs proceeds is doubtful. Fuchs believed that it came from the hair follicles; G. Simon regards it as an abnormal secretion from the surface of the skin, not especially implicating the follicles. When it is examined microscopically, it is found to be made up of epidermis, threads of cotton, silk and wool, with particles of sand, insects, &c. Sometimes, especially in cases of long standing, cryptogamic vegetation is found amongst it. The older writers described the hairs as thickened, swollen at the roots, and infiltrated with sticky reddish or reddish-white fluid. Later writers have not confirmed these observations. G. Simon found no change in the hair, either at the root or in the shaft; it was not brittle or infiltrated with any abnormal material. He could not find, as stated by Günsburg, any vegetation in the hairs themselves.

On chemical examination, the peculiar matter has been found to consist of extractive matters, with ammoniacal compounds, fats, and fatty acids; with some salts, especially chloride of sodium, sulphate, phosphate, lactate, and acetate of soda; with but little potash, magnesia, iron, and silica. These analyses throw no light on the nature of the disease. It has been suggested by Hebra, that plica polonica is not a distinct disease, but eczema, or other skin affection, much neglected. This theory obtains some plausibility from the circumstance that in Poland there is a popular prejudice that this condition of the scalp is a cure for other maladies. On the other hand, it is not confined to the poor and ignorant, and is met with beyond the limits of Poland.

## CHAPTER XIX.

### ACUTE ERUPTIVE DISEASES (CONTAGIOUS).

MEASLES, SCARLATINA, VARIOLA, VARICELLA, VACCINIA, TYPHUS, TYPHOID,  
ERYSIPELAS, AND EQUINIA.

It is not my intention to enter at any length upon the consideration of the contagious exanthemata, rather leaving them to the authors of treatises on General Medicine; inasmuch as the phenomena presented by the skin in these diseases play a very subordinate part as compared with the constitutional symptoms.

It will however be advisable, for the purpose of diagnosis and for the sake of completeness, shortly to describe the eruptions themselves.

#### MEASLES.

(*Rubeola, Morbilli; Rougeole, Fr.; Masern, Germ.*)

The eruption of measles commonly appears on the fourth day of illness; to this rule the exceptions are, however, very numerous; it has been seen on the first day, more frequently on the second, more so on the third and fifth, and it may be delayed to the tenth or twelfth day, or even later. It is first seen on the temples, behind the ears, and on the nape, soon extending forwards to the face, forehead, neck, and upper part of the chest, and backwards to the upper part of the back. It makes its appearance in the form of spots or red points, slightly elevated, bearing at first a close resemblance to the early eruption of smallpox, but not having such a shotty feel. In the course of twenty-four hours the single

punctæ and papules have increased in size, and the color is deeper. The distinctive tint of a measles rash is a mixture of red with a slight tinge of brown. At the height of the eruption, single spots may attain the size of a pea, and they are often arranged in crescentic patches, the intermediate portions of skin being of the normal color. By the end of the third day of the eruption, or the sixth of the disease, it has extended to all parts of the body from above downwards. In very young children the rash is more punctiform, and extends over the entire surface more rapidly. On the seventh day of the disease the exanthem begins to fade in the same order as it made its appearance, except that exposed parts grow pale more quickly than those that are covered. After the redness has disappeared, there remain for a day or two yellow or brownish stains in points or patches. Slight branny desquamation commonly ensues on the face, neck, and hands, and comes to an end within a fortnight.

Such is the course of the eruption in a normal case of measles; but numerous irregularities are apt to occur in the form of the eruption, in its extent, as well as in its course and duration. In some cases isolated papules predominate, in others there are scarcely any elevated spots, in others there is a mixture of miliary vesicles, in others the eruption is in some places nearly confluent, leaving at those parts comparatively little unaffected skin, whilst in another set of cases capillary hæmorrhage takes place, so that the spots and patches do not disappear on pressure. In some instances the rash, instead of beginning to disappear on the third day, may be persistent for seven or eight days, whilst in other cases it suddenly disappears; this last phenomenon is often caused by determination to the lungs or some internal viscus, though it is more commonly regarded as the cause and not the effect of internal mischief.

The constitutional symptoms and the affections of the

respiratory and gastro-intestinal mucous membranes which characterize measles will not be here described.

### SCARLATINA.

(*Scarlet Fever*; *Scarlatine*, *Fr.*; *Scharlachfieber*, *Germ.*)

The normal date of the appearance of the rash in scarlatina is the end of the first or the beginning of the second day; this is the most frequent date, but it may sometimes be seen after a few hours' illness, or its appearance may be delayed till the fifth, sixth, or even seventh day. Its distinctive characters are—fine red punctæ, standing near to each other, so as to give almost the appearance of uniform redness; its tint is at first a light rose-red, but gradually assumes a dark-scarlet hue, which disappears for the moment on pressure. On the face it is usually uniform. The eruption generally lasts three days, but it sometimes disappears at the end of one day or less, whilst in other cases it lasts a week or more; it has been known to remain visible as late as the sixteenth day of the disease. The patient sometimes complains of pricking, itching, or burning sensations in the skin.

The eruption, which appears at first upon the neck, face, and chest, gradually spreads to the arms and forearms, over the back and the lower extremities. The hands and feet are especially affected. It disappears in the same order, leaving a slight yellow tint, which soon vanishes. Desquamation almost always ensues between the sixth and the twenty-fifth day (commonly before the tenth day), and lasts from one to three or four weeks; it usually begins on the neck or forehead in the form of small scales, and extends to other parts either in the same form, or as large flakes; on the hands and feet, the cuticle may come off in complete sheaths. It usually lasts longest on the hands and feet, successive exfoliations often occurring. Irregularities occur in the appearance of

the eruption : it is sometimes seen on the loins, the knees, or the elbows, before the neck and chest; occasionally it appears on the entire surface at once, or it may be limited throughout to single patches of two or three inches in diameter on different parts of the body.

Sometimes the follicles of the skin are unusually prominent and reddened; not uncommonly miliary vesicles are formed; in other cases—described as *scarlatina variegata*, or *rubeola scarlatinosa*—the original red spots increase to the size of patches, which coalesce, so that the skin is of a uniformly dark-red color at some parts, and of a lighter red at others. Hæmorrhagic spots and patches sometimes occur. Scarlatina may be complicated with urticaria. Chronic eruptions, such as eczema, psoriasis, or scabies, do not exclude scarlatina; but they are usually kept in abeyance during the acute disease, to return in full force subsequently.

#### VARIOLA.

(*Smallpox*; *Petite Vérole*, *Fr.*; *Blattern*, *Germ.*)

The eruption usually appears on the third day, having been preceded by severe constitutional symptoms. In unmodified smallpox it makes its first appearance on the face and hairy scalp. Small elevations in the form of red papules of the size of hemp-seeds are seen. It is stated by Hebra that they occur especially at the orifices of the hair follicles and sebaceous glands. During the following day these papules increase in number, but still remain distinct from each other. On the sixth day the papules are changed into vesicles, with a central depression and inflamed margin. They increase in size on the seventh and eighth days, and on the ninth or tenth day the contents of the vesicles become purulent, a change which does not reach the vesicles on the extremities till the eleventh or twelfth day. The pustules are spherical, and the inflammatory areola is larger.

Confluence of pustules takes place when they are very

thickly set, and this gives rise to general swelling of the skin, so that the eyelids are closed by oedema, the nares are obstructed, and the lips everted. The contents of the pustules dry into a firm crust, the swelling subsides, and the redness round separate pustules disappears. By the end of the fourth week the crusts are all detached, and leave either simple stains or scars, which are small or large according to the depth and extent of cutis involved in the pustulation.

The eruption distinctive of smallpox is often preceded by roseola, as described under that head.

In the worst confluent cases the pustules come to maturity more rapidly, and instead of being circular they are irregular in shape, flat, and contain sometimes a brownish ichor.

#### *Varioloid—Modified Smallpox.*

This is the form which smallpox assumes when it occurs after vaccination or a previous attack of smallpox. The eruption often appears earlier, and it is first seen on the wrist and the nose. The eruption runs a more rapid course; some pustules are regularly formed, and present the central depression, but they are usually small. Some papules do not advance to the vesicular stage, and some vesicles dry up without suppuration. The constitutional disturbance is almost at an end when the eruption has appeared.

#### *Varicella—Chicken-Pox.*

The eruption appears with but very slight premonitory illness, lasting never more than twenty-four hours. It begins on the back as distinct red papules, having all the characters of smallpox; the next day vesicles are formed, and on the third day they have attained their maturity. Many of them are ruptured without suppurating, and a thin scab is formed; a few become pustular, with or without distinct umbilication. On the fifth day the eruption disappears; sometimes, but not often, troublesome ulcers result, and scars are left on recovery.

## VACCINIA.

<sup>1</sup> "When vaccination has been performed on a healthy infant, the puncture may be felt elevated on the second or third day, and soon afterwards, if examined with a magnifying glass, appears surrounded by a slight redness. On the fifth or sixth day a distinct vesicle is formed, having an elevated edge and depressed centre. On the eighth day it appears distended with clear lymph. The vesicle on this its day of greatest perfection, is circular and pearl-colored; its margin is turgid, firm, shining, and wheel-shaped. Late on the seventh or early on the eighth day, an inflamed ring or areola begins to form round the base of the vesicle, and with it continues to increase during the two following days. This areola is of circular form, and its diameter extends from one to three inches. When at its height on the ninth or tenth day, there is often considerable hardness and swelling of the subjacent cellular membrane. On the tenth or eleventh day the areola begins to subside, leaving as it fades two or three concentric circles of redness. The vesicle now begins to dry in the centre, and acquires there a brownish color. The lymph which remains becomes opaque, and gradually concretes, so that about the fourteenth or fifteenth day the vesicle is converted into a hard round scab of a reddish-brown color. This scab contracts, dries, blackens, and about the twenty-first day falls off. It leaves a cicatrix, which commonly is permanent in after-life, circular, somewhat depressed, dotted or indented with minute pits, and in some instances radiated. The above-described local changes, while in active progress, are attended by feverishness; first, from the fifth to the seventh day, so slightly that often the fact passes unobserved; and again, more considerably during those days when the areola is about its height; the infant now being restless and

<sup>1</sup> Gregory, revised by Ceely and Marson.



hot, with more or less disturbance of stomach and bowels. About the same time, especially if the weather be hot, children of full habit not unfrequently show on the extremities, and less copiously on the trunk, a lichenous, roseolar, or vesicular eruption, which commonly continues for about a week. When vaccination is performed on such adults or adolescents as have not previously been vaccinated, and likewise when lymph is employed which has recently been derived from the cow, the resulting phenomena, as compared with the preceding description, are somewhat retarded in their course, and the areola is apt to be much more diffuse. There is also more feverishness, but eruption is less frequently seen.

“When persons who have once been efficiently vaccinated are some years afterwards re-vaccinated with effective lymph, there sometimes result vesicles which, as regards their course, and that of the attendant areola, cannot be distinguished from the perfect results of primary vaccination. But far more usually the results are more or less modified by the influence of such previous vaccination, often no true vesicles form, but merely papular elevations surrounded by areolæ: and these results having attained their maximum on or before the fifth day, afterwards quickly decline. Or if vesicles form, their shape is apt to vary from that of the regular vesicle, and their course to be more rapid, so that their maturity is reached on or before the sixth day; their areolæ decline on or before the eighth day, and their scabbing begins correspondingly early. In either case the areolæ tend to diffuse themselves more widely and less regularly, and with more affection of the cellular membrane, than in primary vaccination; and the local changes are accompanied by much itching, often by some irritation of the axillary glands, and in some cases, on the fourth or fifth day, by considerable febrile disturbance.”

TABLE TO ASSIST IN DIAGNOSIS.

<i>Measles.</i>	<i>Scarlatina.</i>
Rash appears on 4th day.	Rash on 2d day.
Begins near roots of the hairs in spots slightly elevated.	Begins on neck and face.
Color, brownish-red.	Color, rose-red or crimson.
Crescentic arrangement, with normal skin between redness.	Punctiform, almost uniform.
Slight branny desquamation succeeds.	Copious desquamation.
Accompanying symptoms, coryza and cough. Heat of skin moderate.	Accompanying symptoms, sore throat, strawberry-tongue, great heat of skin, rapid pulse.
<i>Varicella.</i>	<i>Varicella.</i>
Rash on 3d day.	Rash on the 1st or 2d day.
First on the forehead.	First on back.
Shotty papules, going on to umbilicated vesicles, and then to pustules, with much inflammation around; often confluent.	Papules, some not advancing, others vesicular, a few pustular, without umbilication; eruption irregular in progress.
Thick scabbing and scars left.	Usually no scars.
Accompanying symptoms, pain in back, vomiting and fever; secondary fever.	Constitutional symptoms insignificant.
<i>Varicella.</i>	<i>Varicella.</i>
Rash on 2d or 3d day.	Rash on the 1st or 2d day.
First on wrists.	First on back.
Shotty papules, some becoming vesicles only, others pustular, but pustules small, and not confluent.	Papules, some not advancing, others vesicular, a few pustular, without umbilication; eruption irregular in progress.
Scabs seldom leaving scars.	Usually no scars.
Symptoms as in Variola, but milder at first; no secondary fever.	Constitutional symptoms insignificant.

## TYPHOID FEVER.

*(Enteric or Pythogenic Fever, Dothín-Entérie.)*

The characteristic eruption is the occurrence of rose-colored spots (papules), very slightly elevated, circular, not hard, rounded on their summits. Their color (a rose red) fades insensibly into the natural hue of the skin. *It always disappears completely on pressure*; and leaves no stain on subsiding. Their ordinary size is about a line in diameter. Each papule lasts about three or four days; fresh papules appear every day or two. The number of papules at one time on the surface varies commonly from six to twenty; they occur on the abdomen, thorax, back, and rarely on the extremities; they usually appear between the seventh and fourteenth day of the disease. Fresh spots generally appear every day or two after their first eruption, till from the twenty-first to thirtieth day. In case of relapse the eruption is usually renewed.

## TYPHUS FEVER.

The eruption is never papular. Its characters vary with its duration. At first it consists of very slightly elevated spots of a dusky-pink color; each spot is flat, irregular in outline, without a well-defined margin, disappearing at first completely on pressure, and varying in size from a point to three or four lines in diameter. The larger spots seem to be made up of the coalescence of smaller ones. In one, two, or three days the spots undergo a change, they are no longer elevated, they become darker in hue, their margins are rather more defined than before, but still imperfectly so. They now only *fade* on pressure. In some cases the spots at this stage grow paler, pass into finely-marked reddish-brown stains, and then disappear. In others, a third stage is reached; the centres of the spots become dark purple, and remain unal-

tered by pressure though the circumferences fade; or the entire spots change into true petechiæ, *i. e.*, dusky crimson or purple spots, unaffected by pressure, with a well-defined margin, but not in the least elevated. This alteration takes place most commonly on the back, the bend of the elbow, and in the groin. The spots in typhus may be either very numerous or very scanty. They usually occur on the trunk and limbs, or they may be limited to the limbs; rarely they are seen on the face. The eruption all comes out within three days of its first appearance. When the spots are numerous many of them are much paler than others, and look as if they were seen through the cuticle. It sometimes gives a mottled appearance to the skin, darker spots appearing on the ground, studded with paler spots. The rash, in some cases, closely resembles measles; in others it is much more spotted; in others so pale that it requires care to be detected. The rash usually appears between the fifth and eighth day, and lasts commonly until the termination of the disease, either by death or by convalescence, between the fourteenth and twenty-first days.

## TABLE TO ASSIST IN DIAGNOSIS.

<i>Typhus.</i>	<i>Typhoid.</i>
Spots first appear between 5th and 8th day. Size, from mere point to 3 or 4 lines, irregular in outline.	Elevated spots, rounded, of more uniform size, first appear between 7th and 14th days.
No successive eruptions.	Successive eruptions till 28th day.
Color, at first dusky-pink, disappearing on pressure, afterwards purple, and not disappearing. Skin often mottled.	Color, rose-red. Disappearing on pressure. Each spot lasting 2 or 3 days only.
Limbs often seat of eruption.	Limbs rarely seat of eruption.

## ERYSIPELAS.

The eruption begins as a small red shining patch, with slight swelling, and some pain. The redness extends to contiguous portions of skin more or less rapidly, being bounded by a distinct raised margin from the sound skin. The redness is very intense, with a tinge of blue; it disappears on pressure, leaving a yellowish tint. Resolution may take place without further change, and desquamation ensue; or the cuticle becomes raised into vesicles or bullæ by an albuminous fluid with a neutral or alkaline reaction. The contents sometimes become purulent. When ruptured, the blebs dry up into brownish crusts, more or less thick. In some cases the subcutaneous cellular membrane becomes inflamed, and suppuration or sloughing ensues (erysipelas phlegmonosum and gangrenosum). The disease sometimes suddenly leaves one part and attacks another part (erysipelas erraticum). The severer forms of erysipelas are rarely erratic; but the erratic tendency is usually an indication of a broken-down constitution, or of organic disease.

In some cases, instead of a bright rose color, the skin presents a pale-brownish or yellowish-red color; and there is sometimes a tendency to gangrene, the skin in such cases assuming a livid tint. The subcutaneous tissue becomes very cedematous. This is a form of disease known as cedematous erysipelas, and is met with in very unhealthy subjects.

All the forms of erysipelas are usually preceded and accompanied by febrile disturbance: the premonitory symptoms last usually twenty-four or eight-and-forty hours.

*Diagnosis.*—The eruption differs from that of scarlatina, in its being limited to one part, in the more uniform well-defined redness, and in the swelling by which it is accompanied. It is never punctiform. It differs from erythema in the fol-

lowing particulars: the swelling and the abruptly-defined margin, as well as the tendency to the formation of bullæ or vesicles, and to œdema. It is accompanied by more constitutional febrile disturbance.

### EQUINIA,

A name given by Elliotson to a disease communicated from horses to man. It is characterized by unhealthy suppuration of the mucous membrane of the nasal cavities, pustular and bullous eruptions on the skin, and abscesses of the lymphatics.

The disease in the horse is described under the name of *glanders*, when the nostrils are affected, and of *farcy*, when the lymphatic system and the skin are attacked without any discharge from the nostrils. The two forms of the disease are identical; the pus of one will reproduce the other; and farcy always leads to glanders if the subject lives long enough.

Cazenave and Schedel describe, under the name of *equinia mitis*, an affection to which horses are liable, known as the grease, and by some authors believed to correspond to the disease in the cow, from which the vaccine virus is obtained. This is a use of the term in which they have not been followed by later authors. The pustules in this disease have a reddish-purple elevated base, are about the size of sixpence, and vary in number. Pus is formed about the third day, and dries up from the tenth to the twelfth day, forming thick crusts.

*Symptoms.*—The period of incubation of equinia proper is said to vary from twenty-four hours to fourteen days; when it has been transmitted by inoculation the period has not exceeded four days. At the onset, there are feelings of malaise, shivering, aching of the limbs, headache, great prostration, sometimes nausea, vomiting, and diarrhoea. Pains in the

joints, especially the knees, shoulders, and elbows, often become very intense; they are sometimes accompanied with swelling, heat, and redness, which often leads to suppuration. Abscesses, more or less numerous, make their appearance on different parts, such as the face, the axillæ, and the calves; they are either limited to the cellular tissue, or extend to the subcutaneous tissue, and may even involve the muscles. They begin as small red spots, followed by whitish papules, which soon suppurate. The disease may run an acute or chronic course. The acute disease is nearly always fatal, whilst from the chronic, recovery sometimes though rarely takes place.

*Treatment.*—Abscesses should be opened early, the nares syringed with dilute solutions of creasote, and the general strength supported by nourishment, tonics, and stimulants. Iodine, with iodide of potassium, is said to have proved useful in some cases.

## CHAPTER XX.

### SYPHILIDES.

I HAVE adopted M. Hardy's classification of syphilides, and have to a considerable extent availed myself of his descriptions of these affections. They are arranged as follows:—

- (1.) Exanthematous (Roseola).
- (2.) Papular (Lichen, &c.).
- (3.) Vegetating (Mucous tubercles, condylomata, &c.).
- (4.) Pustular (Syphilitic impetigo, S. acne, S. ecthyma, S. varicella).
- (5.) Vesicular (Syphilitic eczema, S. herpes).
- (6.) Squamous (Syphilitic psoriasis and lepra).
- (7.) Pigmentary.
- (8.) Tubercular (Disseminated and clustered).
- (9.) Pustulo-crustaceous (Syphilitic ecthyma, S. impetigo, and S. rupia).
- (10.) Ulceration (Serpiginous and perforating).

This important class includes all those affections of the skin which are developed under the influence of syphilis. They present very great variety, and they are characterized either by exanthema, papules, vesicles, pustules, tubercles, squamæ, or other lesions, which may occur separately or in combination. They have, however, certain common distinctive characters, usually well marked; hence it is important that I should first describe.

The character which is usually most insisted on is one the value of which has been overrated, viz., the color.



When well-marked, it is no doubt very characteristic, but it is often ill-defined, and is occasionally simulated by the color of eruptions which are not syphilitic. It is commonly spoken of as copper-colored; it was described as like the lean of ham by Fallopius; it is of a dull reddish-brown color. It is more marked in persons of dark complexion than in fair-skinned persons. It is seen in papules and tubercles, around the margin of pustules, vesicles, and ulcers, and in recent scars. It is not so well seen in the very early stages of syphilis as at a later period.

2. A second character, very usually met with, is what has been called *polymorphism*; that is to say, the combination at the same time in one patient of several distinct elementary lesions, such as maculæ, scales, and pustules, or scales and ulceration.

3. The *circular* or *crescentic* form, with a tendency to centrifugal growth, is common in syphilides. It is, however, also seen in non-syphilitic psoriasis, in ringworm, in herpes, iris, and other affections.

4. The *absence of itching and pain* is another usual character, which is not absolutely constant. Syphilides of the scalp are sometimes attended with itching, and other syphilides are also sometimes thus characterized at an early stage.

5. The *crusts* which succeed syphilitic pustules or ulcers have a peculiar dark-green tint; they are thick, uneven, very adherent to the skin; their surface is stratified, and presents eminences and depressions.

6. The *ulcers* of syphilides are rounded, sharply cut, and their floor is grayish, and covered with a sort of false membrane; the pus is sanious and plastic. Often around the ulcer is seen the characteristic copper-color.

7. The *scars* are circular or crescentic; the centre is more or less depressed, and the skin is either wrinkled or even and

very fine. The color is at first a violet-brown, and subsequently becomes white, like other scars.

Ulceration is a more frequent result of syphilides than of similar eruptions which are not syphilitic. Any part of the body may be attacked by a syphilitic rash, but there are some forms which specially affect certain parts; a papular syphilide is common at the back of the neck; syphilitic roseola is more frequent on the internal than on the external aspect of the limbs; the hands and feet are specially affected by squamous syphilide, and the scalp by a superficial pustular syphilide like impetigo.

*General symptoms.*—The appearance of a syphilide is sometimes ushered in by febrile disturbance, malaise, loss of appetite, and a sense of fatigue. It often makes its appearance in the midst of apparently good health; at other times, especially in the later periods of the disease, there is notable anæmia and cachexia.

Syphilides may be divided into secondary and tertiary. The secondary forms are often accompanied with such symptoms as the following: swelling of the lymphatic glands of the inguinal and posterior cervical regions, mucous tubercles on the vulva, anus, or throat; headache, nocturnal rheumatic pains in the limbs, and baldness. The tertiary forms are attended by another class of symptoms, dull pains in the bones, exostoses, necroses, and syphilitic cachexia.

There is one peculiarity in the *progress* of syphilitic eruptions, viz., that they tend to change from one form to another, as from an exanthematous to a papular form, and from a papular to a squamous form.

### ROSEOLA.

This is usually the earliest manifestation of syphilis in the skin. Some authors have maintained that it is never wanting, though often overlooked. It usually appears from three

to six weeks after the primary disease; it may be delayed for three or four months, seldom longer. . It may appear suddenly over nearly the entire surface, or in a progressive manner; it spreads from the chest to the abdomen, thighs, and forearms. It is characterized by spots or patches, irregularly rounded, but slightly elevated, and varying in size from that of a pea to that of a shilling. At first their color is rose, gradually becoming brown, and as they decline grayish. They seldom appear on the face and neck. The progress of this affection is usually rather rapid; its course is run in a month or six weeks, and it usually disappears without desquamation.

*Diagnosis.*—It may be confounded with *simple roseola*. It will usually be known by the history and the concomitant symptoms, such as swollen lymphatic glands, sore throat, loss of hair, headache, and rheumatic pains. The rash of *measles* during its decline may resemble syphilitic roseola, but the accompanying symptoms and the history will prevent any mistake. I have seen a case in which syphilitic roseola was mistaken for *typhoid fever* on the first day of eruption. This is a mistake which would not often occur; the febrile symptoms preceding it are not usually sufficiently severe, and the course of the eruption will speedily remove any doubt on this head. The spots in typhoid fever are more distinctly defined, and of a more uniform size; they do not change in tint, and disappear entirely in a few days.

#### PAPULAR SYPHILIDE.

Under this head two varieties are described—the lenticular and the flat, or the small and the large.

The first variety is also known as syphilitic *lichen*. This form occurs at an early period, often coincidently with roseola. The papules are small and numerous, distinctly elevated; in color they are similar to syphilitic roseola. They termi-

nate by fine desquamation, which commences usually at the circumference of the papule, and thus forms a white border, which was especially insisted on by Biett as distinctive. Sometimes the scales are thicker and in several layers, and are several times renewed; the case then gets the name of papulo-squamous syphilide. It becomes merged, in fact, into a squamous disease. The favorite seat of this eruption is the back of the neck, but it also occurs on the forehead, the chest, the back, the abdomen, and the limbs. It is unattended with pain or itching. The progress of it is somewhat slow, lasting from three to eight weeks or more. In some cases successive crops of eruption occur, and thus the duration may be still more protracted.

*Diagnosis.*—Unlike *lichen*, the papules do not itch, are not clustered into patches, and after a short time have the peculiar syphilitic color.

*Prurigo* is distinguished by the black crust on the papules, and other signs of scratching. *Erythema papulatum* has a more diffused color, and the spots are larger. In *acne indurata* there are often some pustules interspersed, and points of *acne punctata*. Its situation on the face and back will also aid in the diagnosis.

The *large papular syphilide* presents papules or patches less prominent but broader, their size equalling a threepenny or sixpenny piece. The color is the same as in the preceding variety. The papules are not so numerous, and they occur on the forehead, the back, the shoulders, and the chest. They end in resolution by desquamation. Sometimes the patches are covered with a thin yellowish scale, almost like a crust, ending at the margins in a whitish prominent edge, which makes the central portion appear depressed; outside this there is occasionally seen a deep red areola. This form has been called by M. Bazin, mucous patch of the skin, but

it differs from the ordinary mucous tubercle in being neither soft, moist, nor accompanied by fetid secretion.

The *horny syphilide* of the hands and feet is classed by M. Hardy amongst the papular syphilides, but is usually described as squamous.

### PUSTULAR SYPHILIDE.

Impetiginous.—Varioliform.—Pustulo-lenticular, or Acne-form.—Ecthymatous.

*Syphilitic Impetigo*.—This eruption appears at an early period of the syphilitic disease. It is characterized by small superficial pustules, which soon dry up into moderately thick crusts of a brown color. Its common seat is the scalp, but it occurs also on other parts. The pustules and crusts have no distinctive color, but the crusts are surrounded by a copper-colored margin, and after healing are followed by spots of the same color. The crusts on the scalp very closely resemble those of ordinary impetigo. This form of eruption is very commonly attended with either an exanthematous or papular rash.

*Varioliform Syphilide*.—This is a rare form of disease, which was described by Cazenave as syphilitic varicella. It usually appears from four to six months after the primary disease. It is preceded commonly by febrile symptoms, and is often attended with sore throat, so that it may readily be confounded with a non-specific eruptive fever.

The eruption appears as red spots, forming an elevation about as large as a split-pea, on which shortly appear from one to three vesicles, pointed, globular, or umbilicated. These vesicles, surrounded at their base by a red margin, which soon becomes brown, are filled with a clear fluid, which shortly becomes turbid, dries, and is converted into a sufficiently thick adherent crust, of a brownish-green color. At the end of a week or ten days the prominence subsides,

and within a fortnight the crust falls, and leaves a brown spot, which gradually grows pale and disappears. This eruption may occur on any part of the surface. The vesicles are not usually numerous.

The progress of the eruption is rather rapid, but the disease may last more than two months, owing to successive crops of eruption.

*Diagnosis.*—It may be distinguished from simple *varicella* or *varioid*, either of which it resembles, by the slow progress of the rash, the color of the areola, and the co-existence of other syphilitic symptoms.

*Pustulo-lenticular Syphilide* (syphilitic acne).—The pustules in this variety are of the size of a millet or hemp-seed; they are isolated, and rest on a base which is at first moderately red, and subsequently becomes brown. The development of each pustule is rather slow, occupying two or three weeks. When the pustule is ruptured, the contents dry into a small crust of a brown or yellowish color. On the fall of the crust a slight depression is left, which sometimes leads to a permanent white rounded scar; in other cases there is only a brown spot left, which gradually disappears.

This eruption usually lasts seven or eight weeks, but may be much more protracted by successive outbreaks.

The favorite seats of this form of disease are the head, face, and limbs, especially the legs.

*Diagnosis.*—Syphilitic acne may readily be confounded with simple acne indurata. In this latter affection, the pustules are larger; they are of a brighter red tint, and have not the copper-colored areola; they never occur on the lower extremities, and the scars are not so round, and are often deeper. This form of syphilide, and the next to be described, occur at a later stage of the disease than those already mentioned; usually between the secondary and tertiary symptoms.

*Syphilitic Ecthyma*; or, *Ecthymatous pustular Syphilide*.—This form of eruption presents characters closely resembling non-syphilitic ecthyma; but the pustules have in addition a copper-colored areola, and the crust has sometimes a greenish-brown tint, and is larger than the pustule itself. On the fall of the crust there is ulceration, which heals, and leaves a scar which is often permanent. The pustules existing at one time are usually not very numerous; they are generally seen on the lower limbs, the trunk, and the scalp. In the latter situation they are often accompanied with baldness.

Syphilitic ecthyma is met with in ill-nourished anæmic, and cachectic subjects, and is an indication of a serious form of syphilis. It is often very chronic. The scars left by syphilitic ecthyma have been known to assume an appearance such as is seen in the keloid of cicatrices, referred to at page 219. In the Guy's Hospital Reports for 1859 a case is described, in which a man's body was covered with ordinary "pustular scars and small red keloid tumors. These were raised, hard, red, and shiny, and sent out claws or processes into the surrounding skin." The patient stated that after the pustules had dried up, the hard tumors appeared as above described.

*Diagnosis*.—It is said that in cases where this disease was preceded by febrile symptoms, and the pustules were umbilicated, as is sometimes the case, it has been confounded with variola. This mistake could not be made if attention were paid to the history, and it must be corrected within a day or two by the course of the symptoms.

*Ecthyma cachecticum* may easily be confounded with this syphilide. It is, however, seldom met with except in infants and old people, and it is almost confined to the legs; the pustules are surrounded by a dark red but not a distinctly copper-colored areola.

*Scabies purulenta* is seated especially on the hands, the feet,

and the nates, and is attended with itching and other signs of scabies.

## VEGETATING SYPHILIDE.

Under this head, M. Hardy includes all eruptions occurring on the skin and mucous membranes, which assume the form of warts or vegetations.

He describes three varieties. (1.) *Syphilide granuleuse*. (2.) *Excrescences*. (3.) *Mucous patches* or *tubercles*.

(1.) *Granulous Syphilide*.—This is a rare variety, which is seen on the lips and the chin, especially in men. It is characterized by small uneven warty prominences of the size of pins' heads, often clustered together in an oblong patch. Their color is dull gray, sometimes copper-colored. They sometimes are arranged in circles, and the area bounded by them is of leaden-gray color.

At the end of a short time the prominences become less conspicuous and disappear, leaving a gray spot, which is slowly effaced.

This syphilide is nearly always accompanied with other signs of syphilis, especially in the mucous membranes and lymphatic glands.

(2.) *Excrescences*.—Under this head are included warts and condylomata. They are not always syphilitic; they may occur from the natural secretions of parts which are congested, if they are allowed to accumulate, as, for instance, on the genital organs of pregnant women.

They present various characters: they are hard, rough, and of a dull gray color, and are then indolent, sessile, and dry, like other warts; or they form vascular rose-colored growths, which are soft, bleed readily, and secrete fetid fluid; these are either pedunculated or sessile.

The ordinary seats of these growths are the arms, the labia, the prepuce, and the glans penis, or within the rectum,



which is known as *syphilis*. They are to be got rid of by treatment with iodine, mercuric iodine, or chromic acid, or nitrate of silver. But this treatment has little effect upon the mucous tubercles.

*Diagnosis.*—Lazarus called these growths *condylomata*, and later writers tubercles but slightly elevated above the surface of the skin. They are met with at all stages of the disease, in syphilis, and may occur on any part of the body on a previously sound surface. It is important to distinguish them usually round or elliptical, sessile or pedunculated, smooth either flat or convex, is covered with a thin white pellicle. If there is no pellicle the surface is slightly fissured and granular. The base is not usually well defined; sometimes they are slightly umbilicated, and sometimes they are ulcerated. The color is either red or grayish, and covered with a thin white secretion.

Another variety is secreted in a plastic fluid of peculiar odor; when dried it is granular in the form of tolerably thick yellowish scales which adhere to the skin with the adjoining skin, and cannot be removed without pain. The favorite seats of condylomata are the vulva, the arms, the scrotum, the penis, the lips, the nostrils and the tongue; more rarely the skin of the face, at the umbilicus, and on the toes.

Condylomata, if left to themselves, usually disappear in a few months, but under treatment more quickly. The elevation subsides, the surface becomes dry, and slight desquamation occurs, whilst a violet stain is left for a time.

Although they usually occur at an early period of constitutional syphilis, mucous tubercles often occur at a later period.

*Diagnosis.* When ulcerated, they may be confounded with chancres, but may be known by not having a concave surface, sharply cut edges, and a gray base. Mucous tubercle

of the umbilicus might be mistaken for eczema, but may be known by the odor, by the elevated surface, as well as concomitant symptoms.

*Papular syphilides* are known by the dry surface and greater consistence of the papules, with their prominent centres, copper color, and white epidermic fringe.

### VESICULAR SYPHILIDE.

This division includes the eczematous and herpetic syphilides, or syphilitic eczema and syphilitic herpes, as they are sometimes called.

If vesiculæ and bullæ are classed together, syphilitic pemphigus is brought under this division. This disease is treated in the chapter on Pemphigus.

Varicelloid, or varioliform syphilide, is sometimes regarded as vesicular rather than pustular.

*Eczematous Syphilide.*—This is characterized by vesicles occurring in groups, or irregularly distributed. When the vesicles are isolated, each one is surrounded by a copper-colored areola. The vesicles are larger, and last longer unbroken, than those of simple eczema. In some cases their contents remain clear, and are absorbed without rupture of the walls.

This form of syphilide is seldom seen on the face. It runs a chronic course, owing to successive outbreaks of the eruption.

*Diagnosis.*—Syphilitic eczema is distinguished from the simple disease by having larger, fewer, and less confluent vesicles. There is also less profuse secretion, little or no irritation, and the copper-colored areola and stain left after the cure of the eruption.

*Syphilitic Herpes.*—The vesicles in this form are either in irregular groups or in circles. The vesicles remain unbroken nearly a week, and are followed by crusts or fine scales,

which leave, when they fall, a copper-colored stain, which disappears without a scar. This form of syphilide is very chronic, its duration being maintained by successive outbreaks.

It sometimes resembles herpes circinatus, but the color, the slow course, and the absence of heat and itching serve to distinguish it.

### SQUAMOUS SYPHILIDE.

(Neligan's Atlas, Plate XI., Fig. 1.)

This form may follow or accompany the papular or tubercular. It resembles ordinary psoriasis in many of its characters, but differs from it in the following respects: the scales are thinner and less laminated, it has no special predilection for the knees and elbows, and the color is sometimes very characteristic. It is seen on the trunk and limbs. In other cases it resembles psoriasis lepræformis, many being arranged in circles, with the margins more raised than the central portions. When it occurs at an early period of the constitutional disease, the patches are not much raised, the scales not very thick, and it runs a tolerably rapid course; but when it occurs at a more advanced period, the patches are more prominent and larger and the scales thicker. It affects especially the face and neck: when it attacks the limbs, unlike psoriasis proper, it often prefers the inner to the outer aspect.

Psoriasis, when limited to the palms of the hands and soles of the feet, is usually syphilitic. It is not, however, always so. I have twice seen psoriasis of the palms without any other part being affected in persons not under the influence of syphilis. The horny syphilide of the hands and feet is usually regarded as squamous. M. Hardy maintains that it is more properly papular. It begins by small round rose-colored elevated patches, which become very hard in the course of a week or ten days. After a time this hard surface

is removed, and a violet stain is left, which gradually fades. There is less tendency to confluence of the affected patches than in ordinary plantar psoriasis, and it occurs at an early period of the disease. Plantar and palmar syphilitic psoriasis does not yield readily to constitutional remedies only, but requires local applications, either tarry or mercurial ointments, or local mercurial vapor baths.

These forms of disease have a great tendency to relapse, and to run a very chronic course.

#### PIGMENTARY SYPHILIDE.

This form has been specially described by M. Hardy. M. Bazin doubts whether it is really a sign of syphilis, inasmuch as it does not seem to be affected by mercury. It appears from the fourth to the twelfth month of the constitutional disease, and as it causes no symptoms, it may be overlooked. It occurs in gray and white patches, varying in size from a sixpenny to a shilling piece; their margins are uneven. They are sometimes isolated, but more frequently confluent. It would seem to be due to an irregular distribution of pigment. It is most frequently seen on the neck and the chest, more rarely on the face and abdomen. It is most usual in persons of fair complexion. It sometimes disappears in a week or two, but sometimes remains for a very long period.

I have never seen this form, and I doubt very much its syphilitic character, although, as stated by M. Hardy, it may be sometimes seen in syphilitic patients.

#### TUBERCULAR SYPHILIDE.

*(Disseminated and Clustered.)*

The syphilitic tubercle is anatomically the same as a papule, differing from it only in size. It occurs also at a more advanced period of the disease, is slower in its progress, and is often followed by a scar.

The *disseminated* tubercular syphilide is characterized by small round or oval swellings, of moderate consistence, as large as a pea, glistening at first, of a deep red, and subsequently of a copper color. They disappear with desquamation, and leave a slight depression of the characteristic syphilitic tint, which becomes gray at a later period, and either disappears or leaves a permanent scar. The favorite seats of this form are the face, the trunk, and the upper limbs.

*Diagnosis.*—It sometimes resembles acne indurata; but the color, the parts affected, the evidence afforded by the condition of the sebaceous follicles, the history, and the concomitant symptoms, will distinguish these affections.

*Clustered Tubercular Syphilide. (Syphilitic Lupus non Exedens.)*

This form makes its appearance under two distinct aspects: in one case there is an irregular collection of small hard and shining round tubercles, of an intense coppery-red; they are but little elevated above the skin, but their base appears to occupy its entire thickness; in other cases they are collected into more regular groups, often circular or crescentic. These tubercles are hard, often covered with a dry gray scale, and do not secrete any fluid; they are free from itching, and are placed side by side without coalescence. More rarely they are confluent.

The circles are formed in one of two ways: either the tubercles are at once arranged around a central portion of skin which is of a leaden-gray color, or several tubercles appear in a group, are absorbed, and leave a scar; whilst other tubercles make their appearance outside those first formed: these may heal, and others appear in an outer circle, the eruption thus extending centrifugally by new concentric tubercular exudations.

The favorite seat of this syphilide is the face; more rarely it occurs on the upper part of the arms and inner aspect of the thighs, and still less frequently on the trunk.

The tubercles usually disappear by interstitial absorption without ulceration; sometimes, however, the central part softens down, and an ulcer supervenes, which is soon covered with a crust of a greenish tint. The course of this syphilide is usually very slow.

*Diagnosis.*—*Ordinary lupus non exedens* is sometimes not easily distinguished from this form of syphilide. The tubercles in the former are flatter, less hard, of a yellowish color, and are attended with more desquamation than the syphilitic tubercles. In some cases the history and concomitant symptoms will be required to make a diagnosis; and if these be not sufficient, anti-syphilitic treatment may be cautiously tried.

The two remaining forms of syphilide (pustulo-crustaceous and ulcerating) occur at an advanced period of the disease, usually in connection with tertiary symptoms, such as exostoses, necroses, and deep ulceration of the larynx.

#### PUSTULO-CRUSTACEOUS SYPHILIDE.

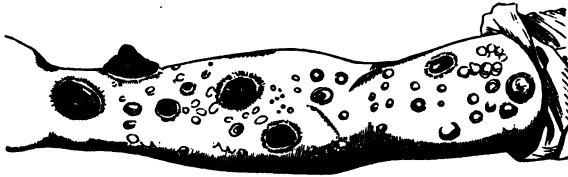
(*Ecthymatous, Impetiginous, and Rupial.*)

The common character of this genus is the presence of a crust covering an ulcer, which is not very deep. It may originate in isolated ecthymatous pustules, or in clusters of small pustules similar to those of impetigo, or in bullæ, containing a mixture of blood and serum, resembling rupia. The primary lesion so soon disappears, and the resulting crust has in all cases so many characters in common, that it is more convenient to use the one term pustulo-crustaceous syphilide than to distinguish between syphilitic ecthyma with ulceration, syphilitic ulcerating impetigo, and syphilitic rupia.

When it begins with an ecthymatous pustule, there often remains a tolerably thick base, almost like that of a boil, surrounding the crust. When it begins with small confluent pustules, there is at first a red patch on which pustules form, which are rapidly ruptured and give rise to a thick greenish crust. When it begins with a bleb, or something between a pustule and a bleb, containing a mixture of serum, pus, and blood, the cuticle soon gives way, and a thick uneven hard crust forms, having a greenish tint, and the form of an oyster or limpet-shell.

*Rupial Syphilide.*—The parts chosen by this form of syphilide are the head and lower limbs. The crusts are firmly adherent, and under them are ulcers, more or less

Fig. 9. .



Syphilitic Rapia.

deep; their margins are sharply cut, and sometimes everted; their floor is granular, sometimes covered with flabby granulations, sometimes red, sometimes gray, and covered with a false membrane. Unless the disease is in the course of disappearance, the crusts are very speedily re-formed. After recovery, a round depressed scar is left, at first coppery, and at a later period dead white. The number of ulcers existing at one time is not usually great, except in the rupial form.

The ecthymatous form chooses the lower limbs, and the impetiginous form the face, the scalp, the neck, and the chest. The course of the pustulo crustaceous syphilide is very chronic; in very cachectic subjects it may last for years, being kept up by successive crops of eruption.

*Diagnosis.*—*Simple ecthyma cachecticum* resembles syphilitic ecthyma, but it occurs chiefly in the very young and the very old; it occurs almost exclusively on the lower limbs; the pustules are smaller, nearer together; the areola has a more violet tint, and the ulceration is not so deep.

The *pustular scrofulide* of M. Hardy closely resembles pustulo-crustaceous syphilide. The crust of the former is either black or white, and not of a dark-green tint; the ulcerations have uneven margins, not sharply cut, and their floor is not covered with a gray false membrane. The scar left by the scrofulous ulceration is not depressed and of an opaque white color, but prominent, uneven, of a violet-red at first, and subsequently of a rose tint.

*Prognosis.*—This is always somewhat serious, inasmuch as it leaves indelible scars, and is an indication of deep-seated cachexia. The rupial form is of the gravest import.

## ULCERATING SYPHILIDE.

### (*Serpiginous and Perforating.*)

This term is used to describe those syphilitic eruptions in which deep ulceration occurs, with a tendency to rapid extension. They may, at the onset, be either pustular or tubercular.

When the ulceration extends mainly on the surface it is called serpiginous, and when it extends in depth it is called perforating.

(1.) *Serpiginous ulcerating Syphilide.*—This form begins either from pustules or from tubercles; and the ulceration extends centrifugally by a new formation either of pustules or tubercles. The extension may take the form of complete circles, or only one part of the circle may heal, whilst at the other there is an extension of the ulceration.



This form occurs near the joints, on the back and shoulders, and even on the face. It is accompanied with pain or itching.

The course of it is slow, but it is often very amenable to treatment.

The scar often presents a pitted appearance, indicating the different depths to which ulceration extends.

*Diagnosis.*—It is distinguished from the pustulo-crustaceous syphilide by the crusts being less thick, and by the tendency of the ulcerations to spread. From the pustular scrofulide it is known by the same characters as are given under the former section.

(2.) *Perforating ulcerating Syphilide* (syphilitic lupus exedens).—This usually originates from tubercles, and is commonly seated on the face, the nose, and lips. Two or three indolent tubercles appear, of moderate size, but not projecting much above the surface of the skin; their summit becomes red, softens, and ulcerates; there is formed a dark-colored thick rough crust, which at first covers a superficial ulcer. Soon the whole thickness of the tubercle is ulcerated, and destruction extends to the deep-seated tissues, not sparing the cartilages, or even the bones. Under the crust is formed a deep sinous ulcer, whose edges are raised and the floor grayish; the crust is speedily re-formed by the plastic sanious and often fetid pus.

The progress of this disease is slow, and it is not so readily arrested as the preceding. Still, recovery does take place, leaving scars at first brown, subsequently pale, irregular in shape, depressed, and often bridled, and causing hideous deformity from the loss of the nose or part of it.

*Diagnosis.*—(See *Lupus exedens*.)

*Canceroid ulceration* commences from a warty tumor which has existed a long time previous to ulceration; it presents prominent everted edges.

*Prognosis.*—From its duration, its depth, and the deformity which attends it, as well as from the cachexia with which it is accompanied, this is the gravest form of syphilide.

*Treatment of Syphilides.*

For all forms of syphilide except the pustulo-crustaceous, and the ulcerating with great cachexia, mercury is the great remedy. This may be given in the form of the protiodide, one grain three times daily, or in the form of calomel, with or without opium, or if the bowels be irritable, blue pill. A very good way of administering mercury without disturbing the digestive organs is by the means of a vapor bath; from ten to twenty grains of calomel volatilized and brought in contact with the skin together with steam, will be found very effectual. A very simple form of apparatus for this purpose is described by Mr. Henry Lee in "Holmes's Surgery," vol. i. p. 422. It consists of a tin case containing a spirit-lamp; immediately over the wick of the lamp is a small circular tin plate, on which the calomel is placed; around this is a circular furrow, in which hot water is placed. This is placed on the ground, and the patient sits over it in a cane-bottomed chair or stool, while he himself is well wrapped up in a mackintosh cloak, fitting closely round the neck. A double blanket answers the purpose of a cloak when this cannot be obtained. The instrument may be obtained of Coxeter, in Grafton Street, and other instrument makers. Three or four such baths as this, at intervals of two or three days, will be found as effectual as the internal administration of mercurials by the mouth for a much longer period. Inunction of mercurial ointment may be employed where the vapor bath cannot be managed, and answers the purpose very well.

In very young children, gray powder is a convenient

mode of giving the drug, or the inunction of mercurial ointment.

Patients are sometimes so weak, anæmic, and cachectic, that mercurials are scarcely admissible at first. It will be advisable in these cases to administer, first, quinine and iron and a nutritious diet, and subsequently give either mercury or iodide of potassium. If the patient be scrofulous or tuberculous, cod-liver oil and the iodide of iron should be given.

A very effectual way of giving mercury is to combine the bichloride with an excess of iodide of potassium, thus forming the biniodide according to the formula given in the Appendix. Some prefer giving mercury and iodide of potassium separately at different times during the day.

In the tertiary syphilides, many authorities prefer giving iodide of potassium alone; but the combination of mercury with it in cases where the cachexia is not extreme, and mercury has not previously been given to excess, adds very much to its efficacy. M. Hardy recommends a mercurial pill at night, and from fifteen to sixty grains of iodide of potassium in solution in the morning. In sarsaparilla I have not much faith, though some good authorities still believe in its efficacy.

Opium may be combined with the mercurials, and is useful in allaying neuralgic or rheumatic pains, but has no special effect on the syphilides themselves.

*Local treatment* is comparatively unimportant in syphilides.

Mucous tubercles are cured more rapidly by using astringents or caustics than by internal remedies only. Warty excrescences and condylomata are also treated by caustics. In some squamous syphilides, tarry ointments alone, or combined with nitrate of mercury, are advantageous. In plantar and palmar psoriasis, local mercurial vapor baths are of service. The ulcers may be treated with slightly stimulating ointment, such as the nitric oxide of mercury and the

bisulphuret, in the proportion of five grains of each to an ounce of cerate.

Hygienic rules must be strictly enforced in the treatment of the syphilides. Regular hours, the avoiding of fatigue and exposure to cold, plain, nutritious diet, pure air, and the use of tepid baths should be enjoined.

Sometimes, in spite of well-devised medical and hygienic treatment, syphilides either do not disappear or frequently relapse. In such cases it is advantageous for the patient to take sulphurous mineral waters, such as those of Harrogate in England, or Barèges and Aix-la-Chapelle on the Continent. The use of mercury or iodide of potassium may be combined with the mineral waters, or may be used after the patient's health has been somewhat re-established by the natural waters.



# APPENDIX.

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## AUTHOR'S CLASSIFICATION OF SKIN DISEASES.

- A. Acute specific diseases (infectious).
- B. Parasitic diseases.
- C. Syphilides.
- D. Other diseases.

### A. ACUTE SPECIFIC DISEASES.

#### *Exanthema.*

- 1. Measles.
- 2. Scarlet fever.
- 3. Typhus.
- 4. Typhoid.

#### *Pustular.*

- 5. Smallpox.
- 6. Cowpox.
- 7. Chickenpox.
- 8. Equinia.

- 9. Erysipelas (*Bullous.*)

### B. PARASITIC.

#### I. *Dermatozoa.*

- 1. Scabies (from *sarcoptes hominis*).
- 2. Prurigo (from *pediculi corporis*).
- 3. Impetigo (from *pediculi oaptitis*).

Other animal parasites, causing different eruptions; *pediculus* or *phthirius pubis*; *pulex irritans* (common flea); *pulex penetrans*; *acanthia lectularia* (bug); *filaria medinensis* (Guinea worm); *leptus autumnalis* (harvest bug); *steatozoon folliculorum*, with or without acne.

#### II. *Dermatophyta.*

- 1. *Tinea favosa* (*achorion Schoenleinii*).
- 2. *Tinea tonsurans* (*trichophyton tonsurans*).
- ? 3. *Tinea decalvans* (*microsporon Audouini*).
- ? 4. *Sycosis* (*microsporon mentagrophytes*).
- 5. *Pityriasis versicolor* (*microsporon furfur*).

## C. SYPHILIDES.

1. Exanthematous—Roseola.
2. Papular—Lichen.
3. Vegetating—Mucous tubercles, condylomata.
4. Pustular { Impetiginous. Acneform.  
              { Varioliform. Ecthymatous.
5. Vesicular { Eczematous.  
               { Herpetic.
6. Squamous.
7. Pigmentary.
8. Tubercular { Disseminated.  
               { Clustered.
9. Pustulo-crustaceous.
10. Ulcerating { Serpiginous.  
                { Perforating.

## D. OTHER DISEASES.

- I. *Exanthems.*
  1. Roseola.
  2. Erythema. { Congestive.  
               { Exudative.
  3. Urticaria.
  4. Pellagra.
  5. Acrodynia.
- II. *Vesicular.*
  1. Miliaria and Sudamina.
  2. Herpes.
  3. Eczema.
  4. Pemphigus.
  5. Rupia.
- III. *Pustular.*
  1. Impetigo.
  2. Ecthyma.
- IV. *Papular.*
  1. Lichen.
  2. Strophulus.
  3. Prurigo.
- V. *Squamous.*
  1. Psoriasis and Lepra vulgaris.
  2. Pityriasis.
  3. Ichthyosis.
- VI. *Hæmorrhagic.*
  1. Purpura.
  2. Scurvy.

- VII. *Pigmentary.*
1. Ephelis and Lentigo.
  2. Nigrities.
  3. Leucoderma.
  4. Albinism.
  5. Irregular distribution of pigment.

VIII. *Diseases of Sebaceous Glands.*

1. Comedo.
2. Strophulus albidus.
3. Stearrhœa.
4. Acne.
5. Molluscum.

IX. *Diseases of Nails and Hairs.*

X. *Gangrenous Inflammations.*

1. Furunculus, or Boil.
2. Anthrax, or Carbuncle.
3. Malignant pustule.
4. Circumscribed gangrene.

XI. *Hypertrophies and Degenerations.*

1. Lupus.
2. Elephantiasis of the Greeks, or *Lepra tuberculosa* and *anæsthetica*.
3. Bucnemia, or Pachydermia.
4. Frambœsia.
5. Keloid and Sclerema.
6. Vitiligo and Vitiligoidea.
7. Warts and Condylomata.
8. Corns.
9. Horns.
10. Nævi.

XII. *Heteromorphous Exudations.*

1. Epithelioma.
2. Cancer.
3. Tubercle.



## WILLAN'S CLASSIFICATION.

## Order I. Papulæ.

Strophulus, Lichen, Prurigo.

## Order II. Squamæ.

Lepra, Psoriasis, Pityriasis, Ichthyosis.

## Order III. Exanthemata.

Rubeola, Scarlatina, Urticaria, Roseola, Purpura, Erythema, Erysipelas.

## Order IV. Bullæ.

Pemphigus, Pompholyx.

## Order V. Pustulæ.

Impetigo, Porrigo, Ecthyma, Variola, Scabies.

## Order VI. Vesiculæ.

Varicella, Vaccinia, Herpes, Rupia, Miliaria, Eczema, Aphtha.

## Order VII. Tubercula.

Phyma, Verruca, Molluscum, Vitiligo, Acne, Sycosis, Lupus, Elephantiasis, Frambæsia.

## Order VIII. Maculæ.

Ephelis, Nævus, Spilus, &amp;c.

## HARDY'S CLASSIFICATION.

I. *Deformities.*

Ephelides, Lentigo, Vitiligo, Albinism, Nigrities.

Tumors, such as Warts, Molluscum, Acne miliaris, Nævi.

Ichthyosis, Keloid.

II. *Inflammatory Affections.*

Erythema.

Acne.

Ecthyma (Rupia).

Strophulus.

Zona.

Prurigo.

Pemphigus.

III. *Artificial.*

1. From an external irritant.

2. From medicaments internally used.

## Pharmacokinetics

## 3d Group.

1. *Acne vulgaris*.
2. *Sycosis*.
3. *Acne rosacea*.

## 4th Group.

1. *Impetigo*.
2. *Ecthyma*.

## 5th Group.

1. *Pemphigus chronicus*.
2. *Pemphigus foliaceus*.

6th Group. *Lupus*.

## V. HÆMORRHAGES.

Purpura—Idiopathic and Symptomatic.

## VI. HYPERTROPHIES.

## A. Of Epidermis.

(a.) Without hypertrophy of papillæ.

1. *Lichen pilaris*.
2. *Tyloma*.
3. *Clavus*.

(b.) With hypertrophy of papillæ.

1. *Pityriasis simplex*.
2. *Ichthyosis*.
3. *Warts*.
4. *Nævus verrucosus*.

## B. Of Pigment.

*Lentigo*. *Chloasma*.

*Melasma*. *Nævus spilus*.

*Pityriasis versicolor* and *nigra*.

## C. Of the Corium.

*Elephantiasis Arabum*.

## D. Of the Follicles.

(*Sebaceous* and *Hair*.)

## E. Of the Appendages.

Excessive amount of hair.

*Cornu cutaneum*.

Superfluous nails.

Excessive thickness of nails.

## VII. ATROPHIES.

A. Of Epidermis; Excoriations—*Rhagades*.B. Of Pigment. *Leucopathiæ*.

2. Non-Contagious.

(a.) Polymorphic Erythema.

- α. E. marginatum.
- E. tuberculatum.
- E. papulatum.
- E. nodosum.
- E. iris.
- E. circinatum.
- β. Pellagra.
- γ. Acrodynia.
- δ. Roseola of Enteric Fever.
- ε. Urticaria.

(b.) Dermatitis.

- α. Idiopathic { Erythematous
- { Phlegmonous { Circumscripta.
- β. Symptomatic. { Diffusa.

(1.) Erythematous.

- (2.) Phlegmonous { Circumscripta,
- { (Furunculus,
- { Anthrax,
- { Pustula maligna,
- { and Farcy).
- { Diffusa.

(c.) Phlyctænoses.

Herpes, Miliaria, Sudamina, Acute pemphigus.

B. Chronic Exudative.

1st Group. (Squamous.)

- 1. Psoriasis or lepra of Willan.
- 2. Lichen exudativus.
- (a.) Ruber.
- (b.) Scrofulosus.

3. Pityriasis rubra.

2d Group. (Pruriginous.)

- 1. Eczema.
- (a.) Squamosum (Pityriasis rubra).
- (b.) Papulosum seu lichenoides.
- (c.) Vesiculosum.
- (d.) Rubrum.
- (e.) Impetiginosum.
- 2. Scabies.
- 3. Prurigo.

DR. BUCHANAN'S CLASSIFICATION.<sup>1</sup>

- I. Inflammations      { 1. Erythematous.  
                              2. Eczematous.  
                              3. Phlegmonous.
- II. New formations.
  - A. Homologous      { 1. Epidermic.  
                              2. Pigmentary.  
                              3. Dermic.
  - B. Heterologous    { 1. Pseudo-plasms.  
                              2. Neo-plasms.
- III. Hemorrhages.
- IV. Diseases of the Accessory Organs.
- V. Diseases defined by uniform causes.
  - 1. Parasitic.
  - 2. Syphilitic.
  - 3. Febrile.

*Erythematous* inflammations (diffusive) are thus classified :—

- 1. Erythema Simplex.
  - Papulatum.
  - Squamosum { Pityriasis furfuracea.  
                  Pityriasis membranosa.  
                  Pityriasis rubra.
  - Nodosum.
  - Strophulus.
- 2. Herpes      { Simplex.  
                  Zoster.
- 3. Urticaria    { Idiopathica; Ab ingestis;  
                  Uterina; Diutina.
- 4. Dermatitis { Idiopathica.  
                  Symptomata—Erysipelas.
- 5. Pemphigus { Vulgaris      { Benignus.  
                  Foliaceus.      { Diutinus.

<sup>1</sup> See Edinburgh Medical Journal, Jan. 1863.

*Eczematous* or selective inflammations are thus classified:—

I. Eczema	{	1st Grade (dry)	{	Erythematodes.
				Papulatum { Lichen simplex. Prurigo.
	{	2d Grade (moist)	{	Vesicular.
				Rubrum.
			{	Pustulosum—Impetigo. { Sparsa. Figurata. Pilaris.
				Rimosum.
	{	3d Grade (dry)	{	Lichen { Exudativus; ruber and scrofulosus.
				Eczema squamosum.

II. Acne.

III. Ecthyma.

IV. Psoriasis { Punctata; Guttata; Nummularis; Circinata or Lep-  
ræformis; Gyrata; Confluens.

## FORMULÆ.

The following formulæ, some original and others copied, are for the most part such as the author has found useful in his practice. Amongst the sources from which they have been taken may be mentioned the London Skin Hospital Pharmacopœia, Wilson on Diseases of the Skin, Hardy, and Hebra.

Many more might have been given, but no object is gained by indefinite multiplication; it only tends to confuse the student.

## BATHS.

The quantity of water in a bath for an adult should be about thirty gallons. In the following formulæ this is the quantity assumed. If more or less be used, the medical ingredients should be altered in proportion.

- (1.) *Tepid Bath*, from 85° to 92° Fahr.
- (2.) *Warm Bath*, from 92° to 98° Fahr.
- (3.) *Hot Bath*, from 98° to 112° Fahr.

(4.) *Acid Bath.*

Acidi nitrici ℥j ad ℥iij.

Acidi hydrochlorici ℥ij ad ℥vj.

Aquæ ad Oss.

In lichen, prurigo, &amp;c.

(5.) *Alkaline Bath.*

Potassæ or sodæ carbonatis ℥ij ad ℥vj in each bath.

In chronic squamous diseases.

(6.) *Corrosive Sublimate Bath.*

Hydr. bichlor. ℥ij ad ℥iv.

Ammon. muriatis ℥ss.

Aquæ Oss.

(7.) *Emollient Bath.*

Common size 6 lbs. or 8 lbs. in water.

Or gelatine  $\frac{1}{2}$  lb. to 1 lb.

In xeroderma, ichthyosis, lichen, &amp;c.

(8.) *Iodized Bath.*

Iodine ℥iij.

Pot. iodid. ℥vj.

Aquæ Oss.

(9.) *Saline Bath.*

Sodii chloridi or bay salt 6 lbs.

Magn. sulphatis ℥vj.

(10.) *Sulpho-Alkaline Bath.*

Potassæ sulphuratæ ℥j.

Sodæ carbonatis ℥iss.

Sodii chloridi ℥ij.

Aquæ C. xxx.

In chronic squamous disease.

(11.) *Acid-Sulphurous Bath.*

Potassæ sulphuratæ ℥iss.

Acidi tartarici ℥iij.

Aquæ ad C. xxx.

(12.) *Compound Sulphur Bath.*

Sulphuris sublimati ℥ij.

Sodæ hyposulphitis ℥j.

Acidi sulphurici diluti ℥ss.

Aquæ Oj.

CAUSTICS.

- (1.) *Acid Nitrate of Mercury.*  
Hydrargyri ℥ss.  
Acidi Nitrici (Sp. gr. 1.5) ℥j.
- (2.) *Arsenical Powder.*  
Acidi Arseniosi ℥j.  
Calomelanos ℥j.  
To be used either as a powder, or made into a paste with mucilage, in lupus.
- (3.) *Cantharidin Caustic.*  
Cantharidin gr. iv.  
Acid. Acetici glacialis ℥vj.  
Spiritus vini rectificati ℥ij.  
Used in tinea tonsurans.
- (4.) *Chronic Acid Caustic.*  
Acidi chromici gr. c.  
Aquæ ℥j.  
For warts and condylomata.
- (5.) *Biniiodide of Mercury Caustic.*  
Hydrargyri biniodidi, adipis, ʒʒ ℥j.  
In lupus and hypertrophic acne.
- (6.) *Chloride of Zinc Caustic.*  
Zinci chloridi ℥ij.  
Pulveris amyli ℥ij.  
Glycerini q. s.  
In lupus.
- (7.) *Vienna Paste, or potassa cum calce.*

LOTIONS.

- (1.) *Borax lotion.*  
Boracis gr. xxx.  
Glycerini ℥ss.  
Aquæ camphoræ ad ℥vj.



(2.) *Carbolic acid lotion.*

Acidi carbolici ℥j.

Glycerini ℥ss.

Aquæ ad ℥vj.

As a sedative in affections attended with itching.

(3.) *Corrosive sublimate lotion.*

Hydrargyri bichloridi gr. xxiv.

Spiritus vini rectificati ℥ss.

Aquæ ad ℥vj.

Used as a parasiticide. Diluted with ten or twenty parts of almond emulsion, it is a good wash for the face in acne simplex.

(4.) *Hyposulphite of soda lotion.*

Sodæ hyposulphitis ℥ij.

Aquæ ℥viij.

When applied, dilute sulphuric acid to be added in the proportion of one to forty. As a parasiticide in pityriasis versicolor and other diseases.

(5.) *Nitric acid lotion.*

Acidi nitrici diluti ℥j.

Tincturæ opii ℥ss ad ℥iss.

Aquæ ad ℥vj.

As a sedative in prurigo and urticaria, diluted with one or two parts of water.

(6.) *Sulphurous acid lotion.*

Acidi sulphurosi (P. B.) ℥ij.

Aquæ ℥vj.

Used as No. 4.

(7.) *Stimulants for Hair.*

Olei amygdalæ dulcis,

Liquoris ammoniæ fortioris, āā ℥j.

Spiritus rosmarini ℥iv.

Aquæ mellis ℥ij.

(8.) *Another stimulant Hair-wash.*

Rum Oj.

Spiritus ammoniæ aromatici ℥iij.

Tincturæ lyttæ ℥vj.

Aquæ ℥vj.

- (9.) *Vleminckx' solution of sulphuret of calcium.*

Calcis vivæ lb. j.

Sulphuris lb. ij.

Coque cum aquæ Oxx. Evaporetur ad Qxij.

Used for scabies.

Sulphuret of calcium and water in equal parts is used at the Skin Hospital as a depilatory.

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MIXTURES.

- (1.) *Mistura ammoniæ acetatis.*

Liq. ammon. acet. ʒj (P. B.).

Antimonii potassio-tartratis gr. i.

Spiritus ætheris nitrosi ʒijss.

Aquæ menthæ pip. ad ʒvj.

Dose, ʒij ad ʒss.

- (2.) *Mistura acida.*

Acidi nitromur. dil. ʒiss.

Tinct. aurantii ʒss.

Aquæ ad ʒvj.

Dose, ʒss ad ʒj.

- (3.) *Mistura alkalina.*

Liq. potassæ ʒiss.

Glycerini ʒj.

Aquæ camp. ad ʒvj.

Dose, ʒss ad ʒj.

- (4.) *Mist. ferri aperiens.*

Ferri sulphatis gr. xij.

Magn. sulphatis ʒvj.

Acid. sulph. dil. ʒj.

Syrupi zinziberis ʒvj.

Aquæ menth. pip. ad ʒvj.

Dose, ʒss.

(5.) *Mistura ferri-arsenicalis.*

Ferri ammonio-citratis ℥j.  
Liquoris arsenicalis ℥lxxx.  
Syrupi aurantii ℥j. -  
Aquæ anethi ad ℥viij.  
Dose, ℥ij ad ℥ss.

(6.) *Mistura hydrargyri iodidi.*

Hydrargyri bichloridi gr. i.  
Potassii iodidi ℥ss.  
Tincturæ iodi (B. P.) ℥viij.  
Infusi caryophilli ad ℥iv.  
Dose, ℥ss.  
In syphilides, especially the tubercular.

(7.) *Mistura olei morrhuæ cum arsenico.*

Olei morrhuæ ℥ij.  
Vitelli ovi j.  
Liquoris sodæ arseniatis ℥ij.  
Syrupi ℥iij.  
Aquæ ad ℥iv.  
One or two drachms for a dose.

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EMOLLIENT OINTMENT OR PLASMA.

*Glycerine Plasma.* Dry potato-starch or arrowroot, ℥j or more, with a little water; add glycerine ℥j: triturate together, and gently heat till it becomes a soft mass. (A cleanly poultice and vehicle for medical substances.)—*Frazer.*

## OINTMENTS.

- (1.) *Unguentum camphoræ.*  
Camphoræ ʒj.  
Spiritus vini rect. q. s.  
Adipis ʒj.
- (2.) *Unguentum calomelanos camphoratum.*  
Camphoræ ʒj.  
Spir. vini rect. q. s.  
Calomel. gr. xl.  
Adipis ʒj.
- (3.) *Unguentum hydrargyri cum zinco.*  
Unguenti zinci oxidi ʒj.  
Unguent. hydrargyri nitratis ʒij.  
Olei olivæ ʒvj.
- (4.) *Unguentum hydrargyri rubrum.*  
Hydrargyri bisulphureti,  
Hydrargyri oxidi rubri, āā gr. iv.  
Adipis ʒj.
- (5.) *Tar plasma* (Brady).  
Picis ʒvj.  
Glycerini ʒvj.  
Pulv. amyli ʒij.  
Warm the glycerine, stir in the starch, add the tar, and raise the mixture rapidly to the boiling point. Strain through a cloth, if necessary, and stir while cooling. (A substitute for unguentum picis; it is more readily absorbed and more easily washed off.)
- (6.) *Unguentum stimulans* (Wilson).  
Pulveris cantharidis ʒvj.  
Adipis purificati ʒiij.  
Macerate at a gentle heat for twenty-four hours, and strain. This requires dilution for use, and may be combined with scents so as to make an agreeable pomade.
- (7.) *Unguentum Staphisagriæ.*  
Olei olivæ ʒj  
Pulveris delphinii staphisagriæ ʒij.  
Adipis ad ʒj.  
As parasiticide in prurigo.

(8.) *Unguentum sulphuris cum hydrargyro* (Startin).

Sulph. sublim. gr. xxx.

Hydr. ammonio-chloridi gr. x.

Hydr. sulphureti cum sulph. gr. x.

Conterendo misceantur et adde

Olei olivæ ʒij.

Adipis ʒvj.

Creosotonis ℥iv.

Used in parasitic, and chronic vesicular and pustular diseases.

(9.) *Unguentum sulpho-alkalinum.*

Sulphuris sublimati gr. lxxx.

Potassæ carbonatis gr. xl.

Adipis ʒj.

For scabies.

(10.) *Hebra's ointment for scabies.*

Sulphuris,

Olei fagi, āā ʒvj.

Saponis viridis,

Adipis, āā lb. j.

Cretæ ʒiv.

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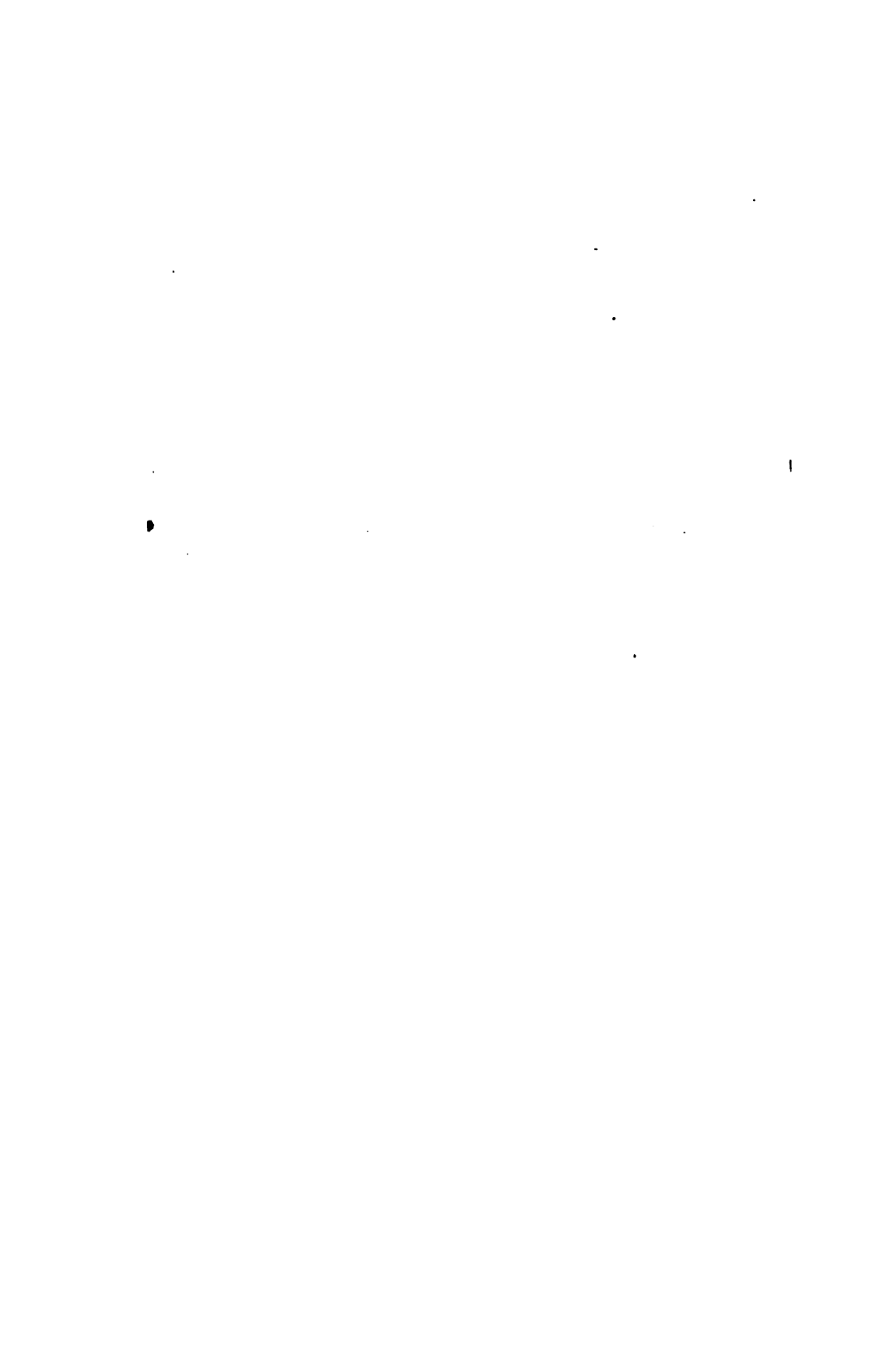
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